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SB

STATISTICAL BULLETIN

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4 Alcohol and Other Drug Abuse Among Adolescents.

What we know about drug use among high school students and the need for early preventive education.

16 United States Population Outlook. Changes coming.

By the year 2050 the major age groups will each constitute about one-quarter of the nation's population.

20 Measurement of Overweight. Based on the 1983

Metropolitan Height and Weight Tables. Body Mass Index* values provide a convenient measure of overweight.



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A Message to Our Readers

It is a pleasure to introduce our readers to the new Statistical Bulletin, now published under the auspices of Metropolitan's Medical Department. SB's new editor Charles B. Arnold, M.D., M.P.H., a noted epidemiologist involved in preventive medicine, was, until recently, Professor in Health Services Management at New York University, and is a Past President of the American College of Preventive Medicine. He is also an editor of the Journal of Preventive Medicine.

Under Dr. Arnold's editorial direction, future issues of the Statistical Bulletin will continue to focus on statistical analyses as well as on the broader aspects of preventive medicine and public health.

Additional topics such as cost-effective management of health resources will be covered. New features will include guest editorials, Capsule Briefs, Historical Perspectives and letters to the editor. We hope that this new Statistical Bulletin will continue to be useful to our current readers and to others in a variety of businesses, professional, and health-related fields.

We regret that in order to continue publishing the Bulletin it has become necessary to make it available only by subscription. Specific details on rates and how to subscribe are enclosed with this complimentary copy.

Since it is you, our readers who, in the final analysis, will be the ones to determine the merit of this newly-expanded publication, we look forward to hearing from you.

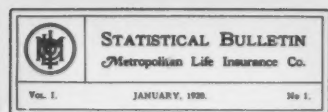
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Contents

- 1 A Message to Our Readers
Paul S. Entmacher, M.D.
 - 2 Editorial: 1984 and Beyond
 - 4 Alcohol and Other Drug Abuse Among Adolescents
Bianca Cody
 - 14 Capsule Briefs
 - 16 United States Population Outlook
Stanley Kranczer
 - 20 Measurement of Overweight
Frederic Seltzer
 - 24 Health and Safety Education Materials
Back Cover/Historical Perspectives
-

The Statistical Bulletin: 1984 and Beyond



1919—A RECORD HEALTH YEAR

The year 1919, despite its very unpromising beginning, closed with better health conditions than have prevailed during any year on record. Between January and March, the United States and Canada were still feeling the effects of the wave of influenza. Many cities were having their worst attacks in those months. The outlook generally was gloomy. Based upon what happened after the epidemic of 1889, health officers expected a return of the influenza during the course of the year and a high death rate from diseases of the heart and kidneys. The country was full of persons who had been left weakened as the result of the influenza, and many of these were expected to die and thus increase the death rate. But the expected did not happen; beginning with the month of April and continuing for each month thereafter up to the end of the year, mortality rates fell sharply below the average of the preceding years. The death rate of the summer of 1919 was unusually low, and the extraordinarily favorable record continued throughout the autumn. In fact, the death rates for the last quarter of the year instead of showing the marked increases usual for the early winter, were as low as some of the best summer and autumn rates on record. From the health standpoint, the year 1919 has been one full of agreeable surprises.

These conditions prevailed in the general population and also among the twelve million policy-holders of the Metropolitan Life Insurance Company. An investigation of the records for policy-holders of this Company shows an unusually low prevalence of such diseases as tuberculosis, typhoid fever, measles, whooping cough, diseases of the heart and kidneys, diarrheal complaints and of accidents. During the last quarter of the year, there has been an increase in the death rates from scarlet fever and from diphtheria; but these were not of sufficient importance to influence the total death rates. A very remarkable feature of the insurance experience has been the marked improvement in the mortality among infants.

SIXTY-FOUR YEARS AGO, the Statistical Bulletin was launched with these words:

"During recent years the Metropolitan Life Insurance Company has sent to health officers and to the press, statements covering the public health statistics of its policyholders. These statements have been so well received and commented upon, that it has seemed desirable to prepare them in more attractive form, to issue them at more regular intervals and to enlarge their scope. It is our purpose to portray the current vital statistics of the Company's membership. The health problems which are outlined by the figures of mortality will receive attention, as will also the effects on life conservation of the various health activities in which the Company is engaged for its policyholders.

"These bulletins will serve to point out what the current conditions of health and life are throughout the United States and Canada, as shown by the latest tabulations of the death certificates received by the Company. Epidemic conditions prevailing here and there in the country will, in many instances, be made public for the first time in our tabulations. The present membership of the Company numbers about eighteen million men, women and children, living in virtually every State of the Union and in every Province of Canada. The policyholders form a body representative, with respect to economic status, occupation, race or color, sex and age, of the general population of English speaking America. What is found among this group should serve as an excellent indication of what is transpiring among the people at large."

The First SB

SB was a novel publication containing data analyses of many public health problems of its day: the influenza pandemic 1918-24, diphtheria, tuberculosis, dangers in childbearing, and many more. Further, the young sciences of demography and epidemiology were applied and described in interesting, readable prose. Additionally, it reflected an early recognition of new problems by SB's parent, Metropolitan's Statistical Bureau. For example, in the first volume (1920) automobile accident fatalities, and also heart disease ("a problem new to the public health move-

ment") were featured. Later, as history well records, these conditions were to become 20th century epidemics. To browse through those early editions provides a rare encapsulated view of this nation's health, 1920 to the present, one not duplicated elsewhere.

Changes

Through the intervening years demography, public health, statistical analysis, and SB changed. For example, Metropolitan's policyholders now number more than 47 million and represent all regions of the U.S. and Canada. SB reflected a growing national recognition that statistical analyses were essential to social and health planning, as well as to good management. SB became an important contributor to discourses about the public's health.

In 1983, as part of a reorganization, SB was relocated in the Medical Department's Health and Safety Education Division, which has a long-standing involvement with public health concerns. This new site seems both appropriate and comfortable, since SB's aims have always been clearly linked to those of the Health and Safety Education Division. The Medical Department, too, has a lengthy history of social and medical care for Metropolitan employees. Together, each is continuously involved in a variety of outreach programs that relate to SB's perspective.

How will these changes affect SB? First, the nearly 60,000 current recipients are being asked to subscribe. This was a difficult decision made necessary by cost factors which were very real. In the most important ways, SB will remain the same; it will retain its concern for timely, high quality analysis of important American and international health and demographic problems. In addition to a continuing editorial emphasis on the statistical aspects of health, we shall write about other topics, sometimes in a social-medical as well as demographic vein; for example, Alcohol and Drug Abuse in Adolescents (see the article by Bianca Cody in this issue); medical care use and overuse; health promotion and wellness; and employee disability after coronary bypass surgery, are but a few. We hope that SB's articles will continue to edify, occasionally pose the unexpected, but always inform.

Trends and Dialogue

Two new sections, Capsule Briefs and an historical perspective will also appear with this issue. Capsule Briefs will introduce selected and timely abstracts of recent articles that have appeared elsewhere which we think you will find important. For example, do you know why blood pressure may be a good way to measure how some people feel about their doctors? Capsule Briefs this issue tells what a group of Italian investigators found.

SB will always have a broad time perspective and, from historical milestones, will try to understand and convey the long-term implications of current events. The past, we know, can be an effective teacher. So, key historical events will be reviewed each issue (see back cover) that remind us of essential continuities in social and health questions which confront our contemporary world.

As the new SB hopes to be an important part of your intellectual diet, we want you to become part of ours, too. We will publish letters to the editor. We will welcome your comments and criticisms about our articles. We hope that if you have an alternate interpretation of our analysis, you will write and explain. In doing so, you will be helping to increase our publication's liveliness and, most essentially, contribute to a proper reflection of its exacting readers' views.

We look forward to providing you with useful, thought-provoking information and analyses that may help you plan for the years ahead.

Charles B. Arnold

Charles B. Arnold, M.D., M.P.H.
Editor in Chief





ALCOHOL AND OTHER DRUG ABUSE AMONG ADOLESCENTS

The use of alcohol, cigarettes, and other drugs by children and teenagers in the United States has reached alarming proportions. The emotional and physical impact of such use on developing minds and bodies and the potential effects on society are of major concern. At least one in every 16 high school seniors is actively smoking marijuana on a daily basis and one in 16 drinks alcohol daily. About two-thirds of all young people try an illicit drug before they finish high school and about one-third try an illicit drug other than marijuana. Although there has been a slight decline in teenage use of many illicit drugs from the peak levels attained in the late 1970s, the present levels are the highest to be found in any nation in the industrialized world.

Surveys of Drug Abuse

Information on the current prevalence of drug use among American high school seniors and data on recent trends in such use have been gathered in annual nationwide surveys conducted for the National Institute on Drug Abuse by the University of Michigan's Institute for Social Research.¹ Beginning with 1975, in the spring of each year questionnaires were given to high school seniors in approximately 125 to 140 public and private high schools, selected to provide a cross section of high school students throughout the United States. Completed questionnaires were obtained from 77 to 83 percent of all students in the sample in the participating schools each year. The 1982 survey involved 17,700 high school seniors; since 1975 more than 126,000 seniors have participated in these surveys.

The questionnaires covered the use of 11 separate classes of drugs: marijuana, inhalants, hallucinogens, cocaine, heroin, natural synthetic opiates other than heroin, stimulants, sedatives, tranquilizers, alcohol, and cigarettes. In some cases additional information was sought for several subclasses of these drugs: PCP and LSD (both

hallucinogens), barbiturates and methaqualone (both sedatives), and the amyl and butyl nitrites (both inhalants), either because of increasing concern about their rising popularity or because of substantial differences in trends. Except for the findings on alcohol, cigarettes, and nonprescription stimulants, practically all of the data elicited by the questionnaires dealt with illicit drug use. Respondents were asked to exclude any occasions on which they used a drug under medical supervision.

Prevalence Among High School Seniors

Figure A illustrates the prevalence and most recent use of 11 types of drugs by high school seniors in the class of 1982. Use of the two major *licit* drugs (alcohol and cigarettes) was more widespread than use of any of the illicit drugs. As shown in the figure, nearly all students (93 percent) had tried alcohol at some time and the great majority (70 percent) had used it in the previous month. About 70 percent had tried cigarettes at some time, while 30 percent had smoked to some extent during the previous month.

Marijuana was by far the most widely used *illicit* drug, with 59 percent of the seniors reporting some use during their lifetime, 44 percent reporting some use in the previous year, and 29 percent reporting some use in the previous month. Of the

"Seniors planning to go to college reported lower rates of illicit drug use than students not planning on college."

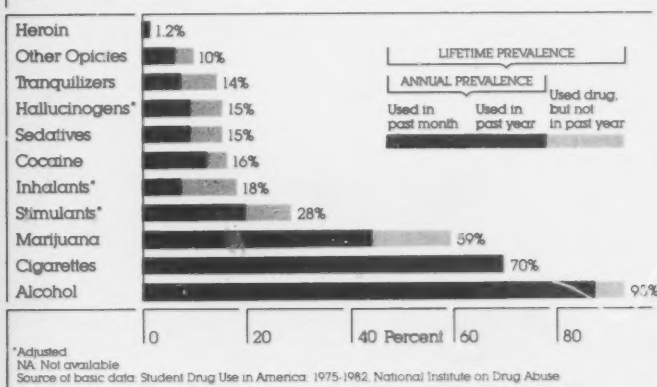
other *illicit* drugs, stimulants ranked second (28 percent) in lifetime prevalence. Inhalants at 18 percent and cocaine at 16 percent ranked third and fourth, closely followed by sedatives and hallucinogens—both at 15 percent—and tran-



quilizers at 14 percent. Opiates other than heroin had been used by 10 percent of the seniors, but only 1.2 percent admitted that they had ever used heroin. Figure A also indicates that illicit drug classifications generally remain in the same order

when ranked by prevalence in the most recent month or year. Inhalants were the exception because the use of certain types of inhalants, such as glues and aerosols, tends to be discontinued at a relatively early age.

Figure A-Prevalence of Drug Use
High School Seniors, Class of 1982



The more frequent the use of drugs the greater the health hazard. Respondents were considered daily users of a drug other than cigarettes if they reported that they had used the drug on 20 or more occasions in the previous 30 days; for cigarettes, the criterion was smoking one or more per day. As shown in Figure B, cigarettes were used daily by more members of the class of 1982 (21 percent) than any other substance; as many as 14 percent reported smoking half a pack or more per day. Marijuana was used on a daily basis by 6.3 percent of the seniors in the survey. Although overall alcohol use among these young people was 5.7 percent, a substantial proportion (41 percent) reported that on at least one occasion during the prior two weeks they had five or more drinks in a row. Less than 1 percent of the respondents reported daily use of any of the illicit drugs other than marijuana.

In general, higher proportions of male than female students were involved in illicit drug use in 1982. The annual prevalence rates for such major drug classifications as inhalants, hallucinogens,

and heroin, as well as the specific drugs PCP, LSD, and the nitrites, were one and a half to two times higher among males than among females. Males reported somewhat higher usage rates than did females for cocaine, sedatives (including the barbiturates and methaqualone), marijuana, and opiates other than heroin. Tranquilizers were used by about equal proportions of both sexes. Only stimulants were used by a slightly greater proportion of females than males—probably because more females used stimulants to achieve a weight loss. Slightly more males than females reported alcohol use, but frequent and heavy drinking were disproportionately concentrated among males. However, cigarette smoking was more prevalent among females than among males.

Seniors expecting to complete four years of college reported lower rates of illicit drug use than did students who did not plan on college. In the case of frequent use of illicit drugs, there were even greater differences according to college plans. While there was little difference between the two groups in overall alcohol usage, frequent use of alcohol was more prevalent among those who did not expect to attend college. By far the largest difference in substance use involved cigarette smoking; only 8 percent of the college-bound smoked half a pack or more each day, compared with 21 percent of the non-collegebound.

Regional Differences

The annual prevalence rates of illicit drug use among high school seniors of the class of 1982 varied regionally, with the highest rate in the Northeast (55 percent), followed by the West (52 percent), the North Central region (50 percent), and the South (42 percent). The Northeast showed the highest annual rates of use of marijuana, inhalants, hallucinogens, and alcohol, the North Central area reported the greatest use of stimulants, while the West had the highest level of

cocaine use. The South recorded the lowest rates for marijuana, hallucinogens, cocaine, and stimulants. The use of barbiturates and tranquilizers was about the same across all regions of the country. Alcohol use tended to be somewhat lower in the South and the West, while regular cigarette smoking (half a pack or more a day) was distinctly lower in the West.

Illicit drug use by the class of 1982 was highest in the large metropolitan areas, slightly lower in other cities, and lowest in nonmetropolitan areas. The largest absolute difference associated with population density was that for marijuana, but there were also strong differences for cocaine, LSD, and PCP.

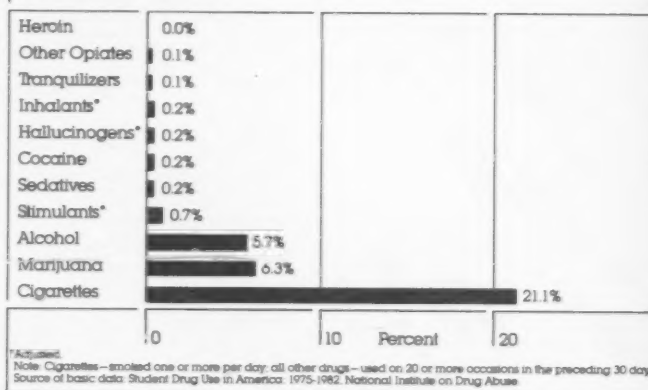
Ethnic Variations

A recent reevaluation of a 1978 national survey of 10th to 12th grade high school students² has provided pertinent information on ethnic differences in the use of alcohol. The study indicated that black high school students drank less alcohol than did white high school students. Abstinence rates were higher for black than for white students—37.0 percent of the black students were abstinent, compared with 20.4 percent of the white students. The proportions of moderate-to-heavy and heavy drinkers were also lower

"At least one in every 16 high school seniors is actively smoking marijuana on a daily basis and one in 16 drinks alcohol daily."

among black students—only 3.8 percent of the black students were heavy drinkers, compared with 16.2 percent of the white students. The researchers noted that exclusion of high school

Figure B—Prevalence of Daily Drug Use in 30-Day Period
High School Seniors, Class of 1982



dropouts did not affect the results to any great extent; census data have shown approximately equal proportions of black and white dropouts in the age group studied. The same survey also showed little or no difference between white and black students in the reporting of illicit drug use.

Trends Among High School Seniors

Recent trends in drug use by high school seniors during the 1975-1982 period are shown in Tables 1A and 1B. Although the proportion of seniors who have ever tried marijuana has changed very little since the peak level of 1979, current use (at least once in the previous month) has shown a considerable decrease—from 37 percent in 1979 to 29 percent in 1982. Even more meaningful perhaps are the figures for daily use, which climbed rapidly from 6 percent of the students in 1975 to 11 percent in 1978, and then dropped back just as rapidly to 6 percent in 1982.

Annual prevalence rates in the use of PCP ("angel dust") have declined dramatically since

Table 1A
Trends in Drug Use by High School Seniors
1975-1982

Type of Drug	Used Once or More in Lifetime								Used Once or More in Past 12 Months							
	Percent of Class of								Percent of Class of							
	1975	1976	1977	1978	1979	1980	1981	1982	1975	1976	1977	1978	1979	1980	1981	1982
Marijuana	47	53	56	59	60	60	60	59	40	45	48	50	51	49	46	44
Inhalants	NA	10	11	12	13	12	12	13	NA	3	4	4	5	5	4	5
Inhalants Adjusted*	NA	NA	NA	NA	19	18	17	18	NA	NA	NA	NA	9	8	6	7
Amyl and Butyl Nitrites	NA	NA	NA	NA	11	11	10	10	NA	NA	NA	NA	7	6	4	4
Hallucinogens	16	15	14	14	14	13	13	13	11	9	9	10	10	9	9	8
Hallucinogens Adjusted†	NA	NA	NA	NA	19	16	16	15	NA	NA	NA	NA	13	11	10	9
LSD	11	11	10	10	10	9	10	10	7	6	6	6	7	7	7	6
PCP	NA	NA	NA	NA	13	10	8	6	NA	NA	NA	NA	7	4	3	2
Cocaine	9	10	11	13	15	16	17	16	6	6	7	9	12	12	12	12
Heroin	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
Other Opiates‡	9	10	10	10	10	10	10	10	6	6	6	6	6	6	6	5
Stimulants§	22	23	23	23	24	26	32	36	16	16	16	17	18	21	26	26
Stimulants Adjusted‡¶	NA	NA	NA	NA	NA	NA	NA	28	NA	NA	NA	NA	NA	NA	NA	20
Sedatives:	18	18	17	16	15	15	16	15	12	11	11	10	10	10	11	9
Barbiturates:	17	16	16	14	12	11	11	10	11	10	9	8	8	7	7	6
Methaqualone:	8	8	9	8	8	10	11	11	5	5	5	5	6	7	8	7
Tranquilizers:	17	17	18	17	16	15	15	14	11	10	11	10	10	9	8	7
Alcohol	90	92	93	93	93	93	93	93	85	86	87	88	88	88	87	87
Cigarettes	74	75	76	75	74	71	71	70	NA	NA	NA	NA	NA	NA	NA	NA

* Adjusted for underreporting of amyl and butyl nitrites.

† Adjusted for underreporting of PCP.

‡ Only drug use which is not prescribed by a physician.

§ Adjusted for overreporting of nonprescription stimulants.

NA: Not available.

Source of basic data: *Student Drug Use in America: 1975-1982* National Institute on Drug Abuse.

measurement was started in 1979—from 7 percent to 2 percent over a four-year period. Annual use of the amyl and butyl nitrites ("poppers" and "snappers") also declined appreciably between 1979 and 1981, and continued at the lower level in 1982. Annual prevalence rates for methaqualone increased between 1978 and

1981, but the drug declined in popularity for the first time in 1982. The annual use of barbiturates, on the other hand, has been declining steadily.

The annual prevalence of heroin use has remained constant since 1975, but the degree of use is likely to be underestimated. The use of opiates other than heroin remained at much the

Table 1B
Trends in Drug Use by High School Seniors
1975-1982

Type of Drug	Used Once or More in Past 30 Days Percent of Class of								Daily Use in Past 30 Days Percent of Class of							
	1975	1976	1977	1978	1979	1980	1981	1982	1975	1976	1977	1978	1979	1980	1981	1982
Marijuana	27	32	35	37	37	34	32	29	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3
Inhalants	NA	1	1	2	2	1	2	2	NA	.0	.0	.1	.0	.1	.1	.1
Inhalants Adjusted*	NA	NA	NA	NA	3	3	2	3	NA	NA	NA	NA	.1	2	2	2
Amyl and Butyl Nitrites	NA	NA	NA	NA	2	2	1	1	NA	NA	NA	NA	0	.1	.1	0
Hallucinogens	5	3	4	4	4	4	4	3	.1	.1	.1	.1	.1	.1	.1	.1
Hallucinogens Adjusted†	NA	NA	NA	NA	6	4	4	4	NA	NA	NA	NA	2	2	1	2
LSD	2	2	2	2	2	2	3	2	0	0	0	0	0	0	1	0
PCP	NA	NA	NA	NA	2	1	1	1	NA	NA	NA	NA	.1	.1	.1	.1
Cocaine	2	2	3	4	6	5	6	5	.1	.1	.1	.1	2	2	3	2
Heroin	§	§	§	§	§	§	§	§	.1	0	0	0	0	0	0	0
Other Opiates‡	2	2	3	2	2	2	2	2	.1	.1	2	.1	0	.1	.1	.1
Stimulants§	9	8	9	9	10	12	16	14	5	4	5	5	6	7	12	11
Stimulants Adjusted†	NA	NA	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	7
Sedatives‡	5	5	5	4	4	5	5	3	3	2	2	2	.1	2	2	2
Barbiturates‡	5	4	4	3	3	3	3	2	.1	.1	2	.1	0	.1	.1	.1
Methaqualone‡	2	2	2	2	2	3	3	2	0	0	0	0	0	.1	.1	.1
Tranquilizers‡	4	4	5	3	4	3	3	2	.1	2	3	.1	.1	.1	.1	.1
Alcohol	68	68	71	72	72	72	71	70	5.7	5.6	6.1	5.7	6.9	6.0	6.0	5.7
Cigarettes	37	39	38	37	34	31	29	30	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1

* Adjusted for underreporting of amyl and butyl nitrites.

† Adjusted for underreporting of PCP.

‡ Only drug use which is not prescribed by a physician.

§ Adjusted for overreporting of nonprescription stimulants.

§ Less than 0.5 percent.

NA: Not available.

Note: Daily use: cigarettes—smoked one or more per day; all other drugs—used on 20 or more occasions in the preceding 30 days.

Source of basic data: *Student Drug Use in America: 1975-1982* National Institute on Drug Abuse.

same level through 1981 but dropped slightly in 1982. Cocaine use more than doubled between 1975 and 1981, but declined slightly for the first time in 1982, dropping from 12.4 percent to 11.5 percent. The sharp rise in recreational use of stimulants—from 18 percent in 1979 to 26 percent

in 1981—seems to have halted in 1982. However, the use of diet pills by female seniors is still particularly high.

With regard to the two licit drugs, the annual prevalence of alcohol use has remained about the same since 1975, continuing at high levels.

Table 2
First Drug Use
High School Seniors, Class of 1982

Type of Drug	Grade in Which Drug Was First Used						Never Used
	6th	7th	8th	9th	10th	11th	
Marijuana	2.7%	15.4%	16.9%	11.9%	7.9%	4.0%	41.3%
Inhalants*	2.1	3.4	2.3	2.6	9	1.5	87.2
Amyl and Butyl Nitrites	.1	1.6	2.7	2.3	2.3	.8	90.2
Hallucinogens*	.1	.8	2.7	3.7	3.4	1.8	87.5
LSD	.1	.5	2.0	2.9	2.6	1.4	90.4
PCP	.2	1.0	1.2	1.7	1.0	.9	94.0
Cocaine	.1	.5	1.8	3.9	5.4	4.3	84.0
Heroin	0	.2	.3	.2	.3	.2	98.8
Other opiates	.4	.6	1.7	2.5	2.3	2.1	90.4
Stimulants†	.1	1.6	5.9	8.1	8.4	3.6	72.1
Sedatives	.3	1.0	3.2	4.4	4.1	2.2	84.4
Barbiturates	.2	.7	2.6	3.7	2.2	.9	89.7
Methaqualone	0	.5	1.9	3.2	3.2	1.9	89.3
Tranquilizers	.6	1.0	2.6	3.9	3.9	2.0	86.0
Alcohol	9.4	21.4	24.9	18.0	12.9	6.1	7.2
Cigarettes (Daily)	3.0	7.1	5.3	4.2	3.2	1.7	75.4

*Unadjusted for known underreporting of certain drugs.

†Adjusted for underreporting of nonprescription stimulants.

Source of basic data: Student Drug Use in America, 1975-1982 National Institute on Drug Abuse

Daily use of alcohol remained at the same level in 1982 as in 1975 (5.7 percent). The rate of occasional binge drinking, however, rose slightly; 37 percent of the class of 1975 said that on at least one occasion during the previous two weeks they had taken five or more drinks in a row, while 41 percent of the class of 1982 reported binge drinking. The dramatic downturn between 1977 and 1980 in cigarette use by this age group appeared to be decelerating in 1981. Daily smoking dropped from 29 percent in 1976 to 20 percent in 1981, but rose slightly to 21 percent in 1982.

Early Use of Drugs

Significant proportions of drug users in the class of 1982 were initiated into *illicit* drug use prior to the 10th grade. As indicated in Table 2, about three out of five of the marijuana users and the inhalant users had their first experience with these drugs between the 6th and 9th grades, when they were 11 to 14 years of age. Heroin and PCP were also used at a relatively early age;

"About two-thirds of all young people try an illicit drug before they finish high school."

about two out of five users started before the 10th grade. In the case of most of the other illicit drugs, between one-fifth and one-third of the users were introduced to drugs before grade 10. Initial use of cocaine, however, usually took place in the last two years of high school. Experimentation with alcohol and cigarettes usually started prior to the 10th grade. About 56 percent of the seniors started drinking before they reached the 10th grade, while 37 percent started

Table 3
Trends in Drug Use by Youths 12-17 Years of Age
1972-1982

Type of Drug	Used Once or More in Lifetime Percent				Used Once or More in Past 12 Months Percent				Used Once or More in Past 30 Days Percent			
	1972	1976	1979	1982	1972	1976	1979	1982	1972	1976	1979	1982
Marijuana	14	22	31	27	NA	18	24	21	7	12	17	12
Hallucinogens	5	5	7	5	4	3	5	4	1	1	2	1
Cocaine	2	3	5	7	2	2	4	4	1	1	1	2
Heroin	1	1	1	*	*	*	*	*	*	*	*	*
Nonmedical Use of:												
Stimulants	4	4	3	7	NA	2	3	6	NA	1	1	3
Sedatives	3	3	3	6	NA	1	2	4	NA	NA	1	1
Tranquilizers	3	3	4	5	NA	2	3	3	NA	1	1	1
Analgesics	NA	NA	3	4	NA	NA	2	4	NA	NA	1	1
Any Nonmedical Use	NA	NA	7	10	NA	NA	6	8	NA	NA	2	4
Alcohol	NA	54	70	65	NA	49	54	47	NA	32	37	27
Cigarettes	NA	46	54	50	NA	NA	13	14	NA	23	12	15

* Less than 0.5 percent.

NA Not available

Source of basic data: National Household Survey on Drug Abuse, 1982 National Institute on Drug Abuse.

during the last three years of high school. Of daily cigarette smokers, about 15 percent started smoking before the 10th grade and about 9 percent started in grades 10, 11, or 12.

The early ages at which the 1982 high school seniors began using drugs is particularly disturbing and indicates the need for education on the dangers of drug abuse and the implementation of preventive programs for young children. Additional data on the current prevalence and recent trends in drug use among young children are available from *The National Household Survey on Drug Abuse*.³ This series of surveys of American households has been conducted every

two or three years since 1971 in order to assess the use of licit and illicit drugs for nonmedical purposes by the general population aged 12 years and older. The surveys are conducted for the National Institute on Drug Abuse by the Social Research Group at George Washington University. The 1982 study involved 5,624 persons, of which 1,581 were 12-17 years of age.

As shown in Table 3, in 1982 more than one-fourth (27 percent) of children aged 12-17 reported that they had tried marijuana at some time during their lifetime, and about one-eighth (12 percent) reported current use (used in the previous month). These figures represent a

reversal of the pattern found in earlier surveys during the 1970s, when successive youth cohorts reported increasing experience with marijuana.

The 1982 survey confirms the correlation between age and marijuana use that was seen during the 1970s. In 1982, about one out of every 10 children aged 12-13, one out of four children aged 14-15, and about half of those 16-17 years of age had used marijuana.

"Illicit drug use by the class of 1982 was highest in the large metropolitan areas, slightly lower in other cities, and lowest in non-metropolitan areas."

The use of hallucinogens among children aged 12-17 dropped slightly from the peak level of 7 percent in 1979 to 5 percent in 1982. On the other hand, the use of cocaine rose from 5 percent in 1979 to 7 percent in 1982. Between 1979 and 1982 there was an increase (from 7 to

10 percent) in the lifetime prevalence of non-medical use of stimulants, sedatives, tranquilizers, and analgesics combined, as well as an increase of 1 to 3 percent in the current use of stimulants. To some extent these increases may be attributed to differences in reporting conditions. In earlier surveys, questions on nonmedical use of these drugs were answered aloud in "open interview" fashion, while in the 1982 survey, respondents used private answer sheets comparable to those for other types of recreational drugs.

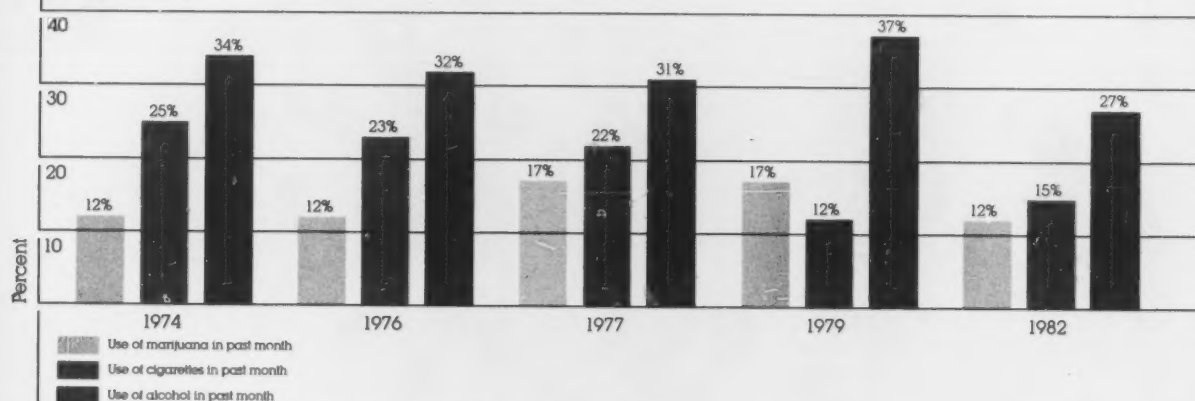
In 1982 it was found that when the nonmedical use of psychotherapeutic drugs is combined in a single index with the use of hallucinogens, cocaine, and heroin, about 14 percent of all children 12-17 years of age had experience with at least one illicit substance other than marijuana (up from about 9 percent during the 1970s); 10 percent reported use of one or more of these "stronger" drugs during the previous 12 months.

Among children aged 12-17, the proportion of current alcohol users dropped from 37 percent in 1979 to 27 percent in 1982. Current cigarette use in this age group increased slightly from 12 percent in 1979 to 15 percent in 1982. A comparison of the current use of marijuana, cigarettes, and alcohol among children 12-17 years of age in selected years is presented in Figure C.

Preventive Measures

Combating the drug abuse problem must go far beyond the monitoring and reporting of trends in drug use. Survey statistics are at best conservative estimates of substance use among adolescents. Surveys based on self-reported data can vary widely from actual behavior, and the exclusion of school dropouts could well result in an underestimation of the alcohol and drug problems among young people. Despite these

Figure C—Current Use of Marijuana, Cigarettes, and Alcohol
Ages 12-17, 1974-1982



Source of basic data: National Household Survey on Drug Abuse, 1982. National Institute on Drug Abuse.

limitations, the level of substance use among adolescents, as revealed in these surveys, clearly indicates the need for education and preventive measures among children of school age. Metropolitan, in recognition of this need and continuing its long history of social commitment, has become actively involved in this effort. Grants from the Metropolitan Life Foundation and from the Richard King Mellon Foundation funded THE CHEMICAL PEOPLE—a community outreach campaign to curb alcohol and drug abuse among children through education, intervention, prevention, and treatment. Concerned parents and citizens attended town meetings across the nation to view a two-part series on public television on November 2 and 9, 1983. These programs discussed the scope of substance abuse by today's youth and presented guidelines for the formation of community task forces to explore

local school-age drug abuse problems and to seek possible solutions. For further information about this continuing nationwide outreach program, write to the Editor of the *Statistical Bulletin*.

An article in the next issue of the *Statistical Bulletin* will explore attitudes, perceptions, and beliefs among children and young people about the dangers of drug abuse.

¹Student Drug Use in America: 1975-1982. National Institute on Drug Abuse, 1983.

²Unpublished data from the Laboratory of Epidemiology and Population Studies, National Institute on Alcohol Abuse and Alcoholism (NIAAA), 1983.

³National Household Survey on Drug Abuse, 1982. National Institute on Drug Abuse, 1983.

CAPSULE BRIEFS

Capsule Briefs are timely selections from the literature that Statistical Bulletin thinks will have broad reader interest.

Pre-retirement Planning Leads to Happier Retirees.

Everyone who nears retirement harbors some dreams about what life will be like then. However, what works best is specific, realistic preparation, which is individually centered, for each prospective retiree. When it is done properly, according to pre-retirement consultants, the results are happy retirees who make fewer demands on the time of the company's pension directors. Besides financial needs, retirees must be prepared to meet their emotional, psychological, and spiritual needs. Because retirement is a major life change, it is perceived as stressful. (S. J. Drury, *Business Insurance* 17(41):64-68, 1983)

Detecting Marijuana by Urine Testing.

Now new technology makes possible the simple, rapid detection of a unique marijuana smoke metabolite that is not produced by tobacco or other plants. While a blood test is more accurate, this new test is less expensive and reliable. A positive result, however, by this new test indicates only the likelihood of prior use. Precise measurement is affected by slow release after accumulation in body fat, as well as urine volume changes due to diet, exercise, and age. Smoking a single marijuana cigarette, however, produces metabolite urine levels detectable for several days. Passive inhalation apparently does not produce a positive test. (Anon. *Morbidity and Mortality Weekly Report* 32(36):469-471, 1983)

Get Me to the Clinic on Time.

Doctors and clinics get frustrated when patients fail to show for appointments. The orderly flow of procedures can break down, high costs can result. To solve this problem, an experiment was undertaken. Persons with clinic appointments were randomized into 3 groups: phone, letter reminders, and no reminders. No-show rate was reduced from 24 percent to 14 percent by phone calls and letters, equally effectively. The authors, in an economic analysis, concluded that in large clinics a 5 percent, or greater, decrease in no-shows yielded savings to pay for their reminder program. "Some physicians of medical centers feel it is not worth their while to send out appointment reminders because of the expense," says Dr. Judy Ann Bigby of Boston's Brigham and Women's Hospital. "By having patients keep appointments, they are actually avoiding losing revenue." It may also eliminate the practice of overbooking appointments to allow for no-shows. Patients who keep appointments would have shorter waits. (J. Bigby, et al, *JAMA* 250 (13):1742-1745, 1983)

What do Workers Think About Toxic Substances?

In the tumult about chemical hazards to employees, scant attention has been given their views. Nelkin described a pessimistic picture of workers' opinions, feelings, and attitudes about the risks with which they may work. In interviews, they told her of feeling isolated, anxious, reluctant to discuss their health, and afraid that complaining could jeopardize their jobs. They felt embarrassed to talk about problems like sterility, cancer, or nervous disorders. Many dismissed their problems as personal, and denied a health risk. They did, however, want a voice in decisions that affect their health. (D. Nelkin, *Science* 222(4620):125, 1983)

Who's Afraid of the Doctor?

It would appear that iatrophobia (fear of doctors) is more common than previously appreciated. Using an intra-arterial blood pressure measure to determine changes in 48 subjects, a team of Italian investigators found that systolic and diastolic values rose an average 27mm Hg and 15mm Hg, respectively, when the doctor arrived at the patient's bedside. Heart rate also had average increase of 16 per minute. The peak response declined (after four minutes) to near prearrival levels, but increased once again on a second visit. (G. Mancina, et al, *Lancet* 2(8352):695-698, 1983)

Does "Binge" Drinking Cause Strokes?

Long considered a cardinal sign of harmful involvement with alcohol, "binge" drinking as a likely contributor to the cause of strokes is reviewed in this editorial. Recent Finnish studies, as well as one in the United States, have shown an association. While the precise biological mechanism by which alcohol might cause strokes has not been clarified, a sufficiency of possible pathways exist to make the relationship clinically tenable. (Editorial, *Lancet* 2(8351):660-661, 1983)

Mothers of the World: Stop Smoking.

In a careful, seven year study, a Harvard research team showed that children of mothers who smoke develop significantly decreased lung function. These results were independent of children's growth patterns and their later personal smoking habits. The investigators concluded that "maternal smoking contributes to reduced development of lung function, and may be important in eventual development of chronic obstructive airway disease (emphysema) in adult life." (I. B. Tager, et al, *New England Journal of Medicine* 309 (12):699-703, 1983)

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NITED
STATES
POPULATION
OUTLOOK

The population of the United States (including the Armed Forces overseas) is expected to increase from 227.7 million in July 1980 to 268 million in the year 2000 and may reach 309 million by 2050. This represents an increase of 17.7 percent between 1980 and 2000 and of 15.2 percent in the 50 years thereafter. Within the next 20 years the nation's population will rise by about 40 million; it will take an additional half century, however, to achieve another population increase of such magnitude.

The overall population outlook for the United States calls for continued growth during the 1980-2050 period, although the relative population gains in each succeeding decade will become progressively smaller. It is likely that the national population will reach a peak in 2050. Population estimates and projections for the period 1970-2050, which are presented in the accompanying table, provide some indication of the size and age distribution of the population of the future.

Senior Citizens—Rapid Growth

During the next 70 years, there will be significant changes in the age composition of the United States population. Senior citizens will constitute the fastest growing segment of the population,

as can be seen from the figure on page 19, which illustrates the trend in the proportionate distribution of the population between 1900 and 2050. In 1900, people 65 years of age or older comprised just 4 percent of the total population; by 1930 this proportion was about 5 percent, and gradually increased to the current

"Population of the U.S. may exceed 300 million by the year 2050."

11 percent. According to population projections, however, those aged 65 or older will make up 13 percent of the population in 2000, 17 percent in 2020, and 22 percent in 2050. The population at these older ages is expected to rise from 25.7 million in 1980 to 67 million in 2050, an increase of 161 percent. The unprecedented increase in the size of the older population of the United States has occasioned a great deal of comment regarding the social and economic implications of such a rapid expansion of this group. Of major concern is the financial stability of the Social Security system and its ability to cope with the demands made upon it by such a large group of retirees.

The outlook for the population under 25 years of age is quite different from that predicted for the elderly. Young people in this age group are likely to constitute a continually smaller proportion of the population in each decade between 1970 and 2050. In fact, the only time since 1900 that there has been an increase in the relative size of this population grouping occurred during the 1950-1970 period. The baby boom that followed World War II accounted for that significant increase in the under age 25 population.

At the beginning of the 20th century there were 41 million persons under age 25 in the United States, comprising more than half of the total population. Although their numbers rose steadily, reaching 58.5 million in 1930, the relative size of the group gradually diminished. By 1950 the proportion of the population under age 25 had declined to 41.6 percent. However, the large number of births in the postwar years was responsible for a sharp increase in the number of persons in this age group—from 63.4 million in 1950 to 80.7 million in 1960 and to 94.5 million in 1970. Since 1970, when the number of persons under age 25 constituted 46.1 percent of the population, the size of this population group has decreased and is expected to continue declining—from 41.3 percent of the population in 1980 to 29.3 in 2050. Despite this gradual decline, those under age 25 will still constitute the largest proportion of the United States population in 2050.

"During the next 70 years, people 65 years and over will be the fastest-growing segment of the population."

The second fastest growing segment of the United States population—the 45-64 age group—is expected to increase by two-thirds, from 44.5 million in 1980 to 74.2 million in 2050. The growth pattern for this middle-aged group has been somewhat similar to that for senior citizens. The population aged 45-64 rose from 14 percent of the total population in 1900 to 20 percent in 1940 and remained at this plateau until 1980.

Population of the United States,* 1970-2050

Year As of July 1	All Ages	Ages Under 25	Ages 25-44	Ages 45-64	Ages 65 and Over
Numbers in Thousands					
1970	206,052	94,473	48,473	41,999	20,107
1980	227,658	93,998	63,465	44,487	25,708
1990	249,731	90,099	81,352	46,481	31,799
2000	267,990	91,976	80,105	60,873	35,036
2025	301,022	91,799	78,253	72,334	58,636
2050	308,856	90,457	77,142	74,197	67,060
Age Distribution†					
1970	100.0%	46.1%	23.6%	20.5%	9.8%
1980	100.0	41.3	27.9	19.5	11.3
1990	100.0	36.1	32.6	18.6	12.7
2000	100.0	34.3	29.9	22.7	13.1
2025	100.0	30.5	26.0	24.0	19.5
2050	100.0	29.3	25.0	24.0	21.7
Percent Change					
1970-1980	11.0%	-0.5%	30.9%	5.9%	27.9%
1980-1990	9.7	-4.1	28.2	4.5	23.7
1990-2000	7.3	-2.1	-1.5	31.0	10.2
2000-2025	12.3	-2	-2.3	18.8	67.4
2025-2050	2.6	-1.5	-1.4	2.6	14.4
1980-2000	17.7	-2.2	26.2	36.8	36.3
1980-2050	35.7	-3.8	21.6	66.8	160.9
Females per 100 Males					
1970	104.3	96.8	103.2	109.1	139.0
1980	105.4	96.4	101.8	110.3	148.1
1990	105.5	95.8	100.4	109.1	151.3
2000	105.5	95.6	99.3	106.8	155.1
2025	106.0	95.6	98.4	103.6	142.2
2050	107.6	95.6	98.4	102.8	148.0

*Including Armed Forces overseas.

†Percent of total population.

Source of basic data: Bureau of the Census, Current Population Reports, Series P-25, Nos. 917 and 922.

Although a slight decrease in this proportion (to 18.6 percent) is expected by 1990, the number of persons in this age category will increase by about two million in the 10-year span. With the aging of the baby-boom generation, the population aged 45-64 is expected to rise sharply—reaching 60.9 million in 2000 and 77.7 million in 2010. At this point, middle-aged adults will comprise more than 27 percent of the total population. With some fluctuation after 2010, the relative size of this age group will level off at approximately one-quarter of the population.

The size of the population aged 25-44 will vary within a relatively narrow range during the 1980-2050 period. In the first half of this century persons aged 25-44 comprised about 30 percent of the total population, but the proportion fell to about 24 percent between 1950 and 1970.

"Young people under age 25 will become a smaller segment of the population."

Although increasing at present, the size of the age group is expected to peak at 33 percent of the population in 1990 before leveling off at approximately 25 percent in later years. By 2050 there may very well be 77.1 million people aged 25-44—an increase of 22 percent in the 1980-2050 period.

Sex Ratio

The sex ratio of the population is also expected to undergo significant change in the future. Females have outnumbered males since 1950 and the disparity is likely to continue widening. By 2050 it is expected that there will be nearly 8 percent more women than men in

the United States. As shown in the bottom tier of the table, there is also likely to be considerable variation in the sex ratios for the major age groups. At ages under 25 there are more men than women. At ages 25-44, women currently outnumber men, but it is expected that there will be equal numbers of each sex by 1990. Popula-

"By 2050 there will be nearly 8 percent more women than men."

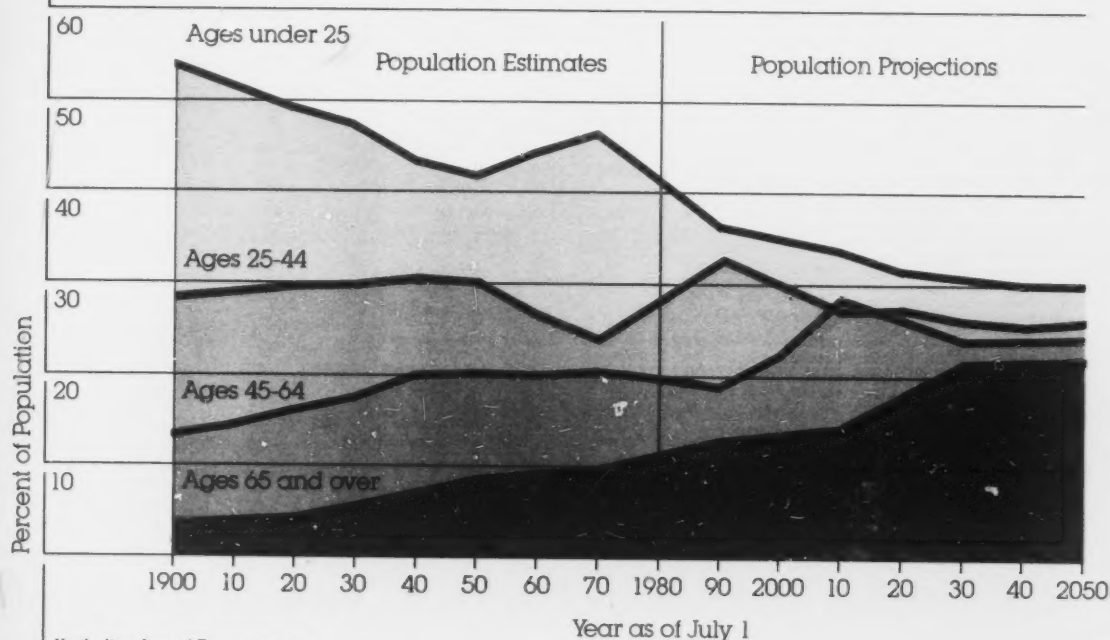
tion projections also indicate that more men will survive to midlife and later, with the result that the sex differential in favor of women at ages 45-64 will decrease. Relatively little change is expected at ages 65 and over, where the ratio is currently about 150 females per 100 males. The sex ratio may fluctuate to some degree in the next 70 years, but will be at virtually the same high level in 2050 as that which prevailed in 1980.

Outlook and Assumptions

Despite the divergent trends in the major population groups, there will be a tremendous convergence in their relative size in the 21st century. By 2050 the four major age groups will each constitute roughly one-quarter of the nation's population—with proportions ranging between 22 and 29 percent.

Population projections are based on assumptions as to fertility, mortality, and immigration trends of the future. Because such estimates are subject to substantial variation—some of the underlying assumptions can be affected by unforeseen events—caution must be exercised in using the figures. Intrinsic to the projections is the assumption that the number of births will climb to almost four million per year in the late 1980s

Trend in Age Distribution of United States Population,* 1900-2050



*Including Armed Forces overseas.

Source of basic data: Various reports and unpublished data of the Bureau of the Census

and then diminish. Other assumptions include a constant net immigration of 450,000 persons each year, and a slow improvement in mortality, with life expectancy at birth in 2050 reaching almost 84 years for females and slightly more than 75 years for males.*

*See article on current life expectancy in Jan-June 1983 issue of the *Statistical Bulletin*.

M

EASUREMENT OF OVERWEIGHT

The concepts of obesity and overweight are often confused. Though sometimes used interchangeably, the term obesity usually indicates excess body fat while overweight denotes excess weight. Obesity can be determined by several types of skinfold measurements, or by tests in laboratories with special equipment designed to make complicated body density determinations. However, when skinfold measurements are not available, obesity is most often defined in terms of overweight because of the simplicity of this method.

Height and Weight Indices

Several different measures have been devised to determine the degree of overweight. One measure that is often used is relative weight in which actual weight is expressed as a proportion or percentage of a standard table of weights—Metropolitan Life's height and weight tables being a recognized standard. Also commonly used are various indices of height and weight, such as:

W/H (weight divided by height)

W/H^2 (weight divided by height squared—known as the Body Mass Index or the Quetelet Index)

W/H^3 (weight divided by height cubed—the Rohrer Index)

H^3/W (height cubed divided by weight)

$W^{1/3}/H$ (cube root of weight divided by height—the Ponderal Index)

$H/W^{1/3}$ (height divided by cube root of weight—the Sheldon inversion of the Ponderal Index).

To be of value, an index should be highly correlated with weight or other measurements of adiposity and be independent of height. Studies¹⁻⁸ have generally found that W/H^2 best fits the criteria—this index is highly correlated with more

direct measures of body fat and has a very low correlation with height. Recently $W/H^{1.5}$ (weight divided by height raised to the power of 1.5 instead of 2) has been suggested by the National Center for Health Statistics⁹ as more appropriate for women. While these indices cannot distinguish between variations in muscularity and bone structure, the measurements can be made easily and quite accurately.

Body Mass Index Values

Table 1 presents body mass index values for men (using formula W/H^2) based on the 1959 and 1983 Metropolitan Height and Weight Tables,^{10,11} which have been adjusted to a nude basis. Corresponding values for women are also presented, using body mass indices of W/H^2 in Table 2 and $W/H^{1.5}$ in Table 3.

For men of small frame the body mass index ranges from 20-21 for tall men to 23-24 for short men, based on the 1983 table, compared with indices of 20-21 for men at most heights in the 1959 table. Among men of medium frame the

"Several different measures have been devised to determine the degree of overweight."

corresponding figures varied from 21-23 among tall men to 24-26 for short men in 1983, while the values in 1959 hovered at 21-23. For men of large frame the indices ranged from 22-25 for tall men to 25-27 for short men in 1983, and remained at the 22-25 level for men of all heights in 1959. According to Garrow,¹² Olympic sprinters have a body mass index of about 23 and marathon runners a body mass index of about 20.

Table 1—Body Mass Index (W/H²)^{*} Values for Men

Based on Weights (Without Clothing) with Lowest Mortality
Ages 25-59

Height (Without Shoes) Feet Inches	1959 Weight Table			1983 Weight Table		
	Small Frame	Medium Frame	Large Frame	Small Frame	Medium Frame	Large Frame
5 2	20-21	21-23	22-25	23-24	23-25	25-27
5 3	20-21	21-23	22-25	23-24	23-25	25-27
5 4	20-21	21-23	22-25	22-23	23-25	24-27
5 5	20-21	20-22	22-25	22-23	23-25	24-27
5 6	20-21	20-23	22-25	21-23	22-24	23-26
5 7	20-21	21-23	22-25	21-23	22-24	23-26
5 8	20-21	21-23	22-25	21-22	22-24	23-26
5 9	20-21	21-23	22-25	21-22	22-24	23-26
5 10	20-21	21-23	22-25	20-22	21-23	22-26
5 11	20-21	21-23	22-25	20-22	21-23	22-26
6 0	20-21	20-23	22-25	20-22	21-23	22-25
6 1	20-21	20-23	22-25	20-22	21-23	22-25
6 2	20-21	21-23	22-25	20-21	21-23	22-25
6 3	20-21	21-23	22-25	20-21	21-23	22-25

* Body Mass Index = Weight/Height²; weight in kilograms, height in meters.

Source of basic data: 1959 and 1983 Metropolitan Height and Weight Tables.

Table 2—Body Mass Index (W/H²)^{*} Values for Women

Based on Weights (Without Clothing) with Lowest Mortality
Ages 25-59

Height (Without Shoes) Feet Inches	1959 Weight Table			1983 Weight Table		
	Small Frame	Medium Frame	Large Frame	Small Frame	Medium Frame	Large Frame
4 8	19-21	20-22	22-25	21-23	22-24	24-27
4 10	19-21	20-23	22-25	21-23	23-25	24-27
4 11	19-21	20-23	22-25	20-22	22-24	24-27
5 0	19-21	20-22	22-25	20-22	22-25	24-27
5 1	19-21	20-23	22-25	20-22	22-24	23-26
5 2	19-20	20-22	21-25	20-22	22-24	23-26
5 3	19-20	20-22	21-24	20-22	22-24	23-26
5 4	19-20	20-22	21-24	20-22	21-24	23-26
5 5	19-20	20-22	21-24	19-21	21-23	22-25
5 6	19-20	20-22	21-24	19-21	21-23	22-25
5 7	19-21	20-22	21-24	19-21	21-23	22-25
5 8	19-21	20-22	21-24	19-21	21-23	22-25
5 9	19-21	20-22	21-24	19-21	21-23	22-25
5 10	19-21	20-22	21-24	19-21	20-22	22-25

* Body Mass Index = Weight/Height²; weight in kilograms, height in meters.

Source of basic data: 1959 and 1983 Metropolitan Height and Weight Tables.

Table 3—Body Mass Index ($W/H^{1.5}$)^{*} Values for WomenBased on Weights (Without Clothing) with Lowest Mortality
Ages 25-59

Height (Without Shoes) Feet Inches		1959 Weight Table			1983 Weight Table		
		Small Frame	Medium Frame	Large Frame	Small Frame	Medium Frame	Large Frame
5	7			25-31	26-32	29-31	30-33
4	10	23-25	25-28	27-31	25-28	27-30	30-33
4	8		25-28	27-31	26-32	29-30	30-33
5	0	24-26	25-28	27-31	25-28	27-30	29-33
5	2		25-28	27-31	26-32	27-30	29-33
5	4	24-26	25-28	27-31	25-28	27-30	29-33
5	6		25-28	27-31	26-32	27-30	29-33
5	8	24-26	25-29	27-31	25-28	27-30	29-33
5	10		25-29	28-31	26-32	27-30	29-33
5	12	25-27	26-29	28-31	25-28	27-30	29-33
5	14		26-29	28-31	26-32	27-30	29-34
5	16	25-27	26-29	28-32	25-28	27-30	29-33
5	18		27-30	28-33	26-32	27-30	29-33
5	20	26-28	27-30	29-32	25-28	27-30	29-33

^{*}Body Mass Index = Weight/Height^{1.5}; weight in kilograms, height in meters.

Source of basic data: 1959 and 1983 Metropolitan Height and Weight Tables.

Using a body mass index based on W/H^2 , the indices among women of small frame varied from 19-21 for tall women to 21-23 for short women in 1983, compared with indices of 19-21 for both tall and short women and of 19-20 for women of middle height in 1959. Among women of medium frame, the values ranged from 20-22 for tall women to 23-26 for short women in 1983, compared with corresponding values that varied from 20-22 to 20-23 in 1959. For women of large frame the indices varied from 22-25 for tall women to 25-28 for short women in 1983 and from 21-24 to 22-26 in 1959. Indices calculated by the formula $W/H^{1.5}$ are proportionately higher.

The range of body mass indices based on the

1983 Metropolitan Height and Weight Tables (presented in this article) corresponds in general

"Metropolitan's height and weight tables are based on the principle of lowest mortality."

with the range embraced by the fifth to the 67th percentile of the indices for men (W/H^2) and the 10th to the 65th percentile of the indices for women ($W/H^{1.5}$) in the United States population, as computed by the National Center for Health

Table 4—Mortality Ratios According to Range of Weights in 1983 Metropolitan Height and Weight Tables

Height (In Shoes)*	Range of Weights † (In Indoor Clothing) ‡	Mortality Ratio		
		Weight Below Range	Weight Within Range	Weight Above Range
5'2"	128-150	114%	106%	125%
5'3" -5'6"	130-164	115	100	108
5'7" -5'10"	138-180	114	97	111
5'11"-6'2"	144-197	115	96	114
6'3" -6'4"	158-207	98	94	119
4'10"	102-131	197%	104%	116%
4'11"-5'2"	103-143	144	95	101
5'3" -5'6"	111-159	127	99	104
5'7" -5'10"	123-173	145	102	109
5'11"-6'0"	135-179	¶	134	365

*Shoes with 1-inch (2.54 centimeters) heels for both men and women.

†From 1983 Metropolitan Height and Weight Tables.

‡Indoor clothing 5 pounds (2.3 kilograms) for men and 3 pounds (1.4 kilograms) for women.

¶Ratio not computed; fewer than 10 deaths.

Statistics. In the population group, about 5 percent of the men have lower indices and 33 percent have higher indices than the insured group, while almost 10 percent of the women in the population group have lower indices and 35 percent have higher indices than the insured group.

Metropolitan Height and Weight Tables

Metropolitan's height and weight tables are based on the principle of lowest mortality. Therefore, the mortality among individuals with weights for height either above or below the table weights can be expected to be higher than the mortality among those whose weights fall within the table limits. This is the case for both men and women, based on grouped data shown in Table 4. The mortality ratio is defined as the ratio of the actual deaths for a particular height and weight group to the expected deaths

among policyholders insured under standard policies—based on the experience in the *Build Study*.¹³

The 1983 Metropolitan Height and Weight Tables are based on life insurance policy data that do not include information on smoking. However, other studies have noted that the weights at which mortality is lowest are different for smokers and nonsmokers. Data from the Framingham Study¹⁴ and from the American Cancer Society¹⁵ indicate that the weights associated with lowest mortality fall below average weights for both smokers and nonsmokers, but are somewhat lower for the nonsmokers.

Frederic Seltzer, a Fellow of the Society of Actuaries, is Assistant Actuary, Metropolitan Life Insurance Company

¹Billewicz WZ, Kemsley FF, Thomson AM. Indices of adiposity. *Br J Prev Soc Med* 16:183-188, 1962.

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³Florey C d V. The use and interpretation of ponderal index and other weight-height ratios in epidemiological studies. *J Chron Dis* 23:93-103, 1970.

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⁸Criqui MH, Klauber MR, Barrett-Connor E, et al. Adjustment for obesity in studies of cardiovascular disease. *Am J Epidemiol* 116:685-691, 1982.

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¹¹1983 Metropolitan Height and Weight Tables. *Statistical Bulletin* 64:2-9, Jan-Jun 1983.

¹²Garrow JS. Weight penalties. *Br Med J* pp 1171-72, Nov 1979.

¹³*Build Study*. 1979. Chicago: Society of Actuaries and Association of Life Insurance Medical Directors of America, 1980.

¹⁴Garrison RJ, Feinleib M, Castelli WP, et al. Cigarette smoking as a confounder of the relationship between relative weight and long-term mortality: The Framingham Heart Study. *JAMA* 249:16 pp 2199-2203, (Apr 22/29) 1983.

¹⁵Lew EA, Gartinkel L. Variations in mortality among 750,000 men and women. *J Chron Dis* 32:563-576, 1979.

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12-page brightly illustrated booklet discusses what young teens want and need to know about diet and exercise, as well as stress, physical development and personal relationships. For schools, community groups, employees and parent/youth programs.



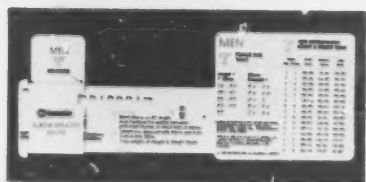
1983 Metropolitan Height and Weight Chart

Gives new weights by height based on lowest mortality for men and women of small, medium and large frames. Glossy bright purple and blue. (18 by 27 inches)



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Coming
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Issues

How Children and Adolescents
Feel About Alcohol and
Other Drug Abuse

Rapid Growth of Older Americans
Projected to 2050

Current Life Expectancy of
Men and Women in the U.S.

Boating Accidents: Circumstances
Associated With Fatalities

Mortality From Heart Disease:
Significant Geographic Variations

Drugs Prescribed in Physicians'
Offices for Specific Conditions

25 YEARS AGO

HISTORICAL PERSPECTIVES

IN THE 1959 STATISTICAL BULLETIN

Metropolitan published new standards of desirable weight by height and type of frame. The data were based on results of the Society of Actuaries 1959 Build and Blood Pressure Study. Findings clearly showed that the lowest mortality generally occurred among people who were well below average weight. Control of body weight was vital to health and longevity. Health education on nutrition, particularly in the schools, needed to be reoriented to emphasize the necessity for caloric balance in the diet. Regular exercise was also encouraged. (Page 1, November-December)

Another unexpected rise in the number of cases of poliomyelitis was reported. In 1955 the Salk vaccine was introduced and, in the following two years, the incidence of poliomyelitis dropped precipitously. However, beginning in 1958 there was a resurgence in the number of cases. The rise was attributed to the failure of large segments of the population to avail themselves of the vaccine. (Page 1, September)

The resident population of the United States was projected to exceed 208 million in July 1970 (official total was 203,984,000—ed.). Vigorous growth in the near future was expected because it was anticipated that the large number of births during the immediately preceding years would continue at a high level. Marked differences in the pattern of geographic increases were expected (and did occur—ed.). (Page 1, June)

Metropolitan celebrated the beginning of its 40th year of publishing the Statistical Bulletin and the 50th anniversary of the establishment of its Health and Safety Education Division. Over the years the broadly conceived programs encompassed many major health problems, focusing activities on changing needs of the times. The programs, designed primarily to promote the health of the Company's policyholders in the United States and Canada, benefited the entire population of the two countries. (Page 1, January)

A 30-year study of floods disclosed that 2,430 people lost their lives. The Ohio Valley experienced a larger loss of life from floods than any other area, accounting for nearly one-fourth of all victims. On the other hand, flood deaths were rare or infrequent in the U.S. Weather Bureau's Great Basin (mainly Nevada), East Gulf, Colorado, and Great Lakes Districts. (Page 8, March)

A study of the reports on occupational mortality by the Registrar General of England and Wales reaffirmed that people in the higher social classes, as indicated by occupation, had appreciably lower mortality than persons at the lower end of the social scale. Differences in mortality among men reflected largely the social and economic factors associated with their standard of living and only to a limited extent the specific hazards of their occupations. The pattern of mortality among the women was very similar to that of the men. (Page 9, October)

Metropolitan paid out over half a billion dollars in death claims in the last year—three times the amount disbursed 20 years earlier. Payments on account of deaths from cardiovascular-renal diseases totaled over \$276,000,000 and, from cancer, more than \$100,000,000—together accounting for three-fourths of all payments to beneficiaries. (Page 5, April)

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JUNE

1984

SB

STATISTICAL BULLETIN

Vol 65 No 2

Apr-Jun 1984

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- 2** **Recreational Boating Fatalities: 1978-82.** Plus an editorial by the U.S. Coast Guard Commandant that describes the federal responsibilities for boating safety.
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- 8** **Projections of Population Growth at Older Ages.** And a related editorial by Karen Davis, Johns Hopkins University, who comments on the implications of Aging for the nation's health care financing.
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- 16** **How Children Perceive Alcohol/Drug Abuse.** Youngsters' attitudes may reveal clues to combating alcohol and drug abuse.

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From the Editor's Desk

For the next 65 years, retirement-age Americans are expected to be the United States' most rapidly growing population group. As SB describes (page 8), the implications of their growth are a remarkable subject when one considers the likely social impact. Particularly noteworthy is the anticipated increase in the numbers of persons 85 years and older, whose presence will mean, for example, that, as many persons enter retirement, they may also be caring for aged parents.

As Karen Davis of Johns Hopkins University explains in her related editorial, a proportionately larger elderly population will mean greater medical care cost problems for the United States during the next 50 years.

On a sunnier note, are you already anticipating summer? For nearly 60 million Americans, summer sun suggests a boating trip. There is, however, an unfortunate side to this recreational boating story: accidents. In this issue, SB examines

the demography of accidental boating deaths in the United States during the period 1978-82.

In a related editorial, James Gracey, Commandant of the U.S. Coast Guard, describes the federal program for the prevention of many recreational boating accidents. In a time of changing definitions for various federal responsibilities, he explains the Coast Guard's program, including its varied coordinating efforts to reduce our national boating accident problem.

Teenagers' perceptions about drug abuse are the focus of the second of a two-part series on youth and substance abuse prompted by the television program, THE CHEMICAL PEOPLE. Are you surprised, for example, that half the fourth graders surveyed believed that some of their friends have used alcohol already? Or, that over half the eighth grade students believed that most of their friends have used alcohol? These and comparable data are regarded by most observers as a clarion call for widespread local action. We hope that effective programs result from them.

Charles B. Arnold

Contents

- 1 From the Editor's Desk
 - 2 Recreational Boating Fatalities
 - 7 The Federal Role in Recreational Boating Safety
James S. Gracey, Admiral/U.S. Coast Guard Commandant
 - 8 Projections of Population Growth at the Older Ages
 - 13 The Medical Care Challenge of an Aging Population
Karen Davis, Ph.D./Johns Hopkins University
 - 14 Capsule Briefs
 - 16 How Children and Adolescents Perceive Alcohol and Other Drug Abuse
 - 22 Accident Death Toll: 1983
 - 24 Health and Safety Education Materials
 - Back Cover/Historical Perspectives
-

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ECREATIONAL
BOATING
FATALITIES:
1978-82

There has been a sizable increase in the number of recreational boating enthusiasts in the United States in recent years. More than 60 million people currently engage in such boating activities, compared with about 45 million in 1975. Moreover, despite the growing popularity of the sport and the increased number of participants, fatalities from all water transport accidents (recreational and commercial) have decreased—from 1,651 in 1970 to 1,429 in 1980.

Water Transport Accidents

Although there has been a decline in mortality from accidents on the nation's waterways, the estimated death toll from such accidents in 1982 ranked second among deaths in all modes of transportation. Detailed data on the recent trend in water transport accident mortality among males (who account for about 90 percent of the

rose sharply at the younger ages, reaching a peak of 20.0 per million population at ages 20-24; the level of mortality remained quite high at ages 25-34, but declined with age to 8.2 per million at ages 65 and over.

Nine out of every 10 fatalities from water transport accidents involve small boats—watercraft propelled by small motors, sails, paddles, oars, etc., and carrying five or fewer passengers; only one in 10 fatalities is associated with larger watercraft. Over 85 percent of all fatalities are due to drowning. The remaining deaths—less than 15 percent of the total—result mainly from falls, explosions and fires, machinery accidents, and asphyxiation by gases or fumes.

Fatalities associated with water transportation occur most often in late spring and summer when boating activities are at their peak. More than half of the deaths annually are concentrated in the four-month period May-August. The risk of a boating death also varies greatly from region to region, reflecting differences in climate and the proximity of bodies of water, as well as the age and sex composition of the population. Fatalities are generally more frequent in the Gulf Coast states, in states that border on the ocean, or in states with sizable bodies of inland waters.

"Nine out of 10 fatalities from water transport accidents involve small boats carrying five or fewer passengers."

fatalities) are shown in Figure A. The death rate among males at all ages combined (adjusted for differences in the age composition of the population) dropped from 16.9 per million population in 1969-70 to 11.8 per million in 1979-80, or by almost a third. There were decreases in every age group. The greatest improvement (about 40 percent) occurred among boys under 5 years of age and aged 10-14, and among men aged 35-44. The smallest improvement (less than 20 percent) was recorded among young men aged 15-19 and 20-24. There were also marked differences by age in the risk of fatal injury from water transport accidents. The fatality rate for 1979-80

Hazards in Recreational Boating

Each year the U.S. Coast Guard compiles statistics on recreational boating accidents (which account for most of the deaths in water transport accidents): in 1982, 1,178 lives were lost. This death toll is considered to be quite complete because of the stringent regulations set by the Federal Boat Safety Act of 1971 for reporting boating mishaps that result in loss of life. (Homicides, suicides, and deaths due to natural causes are excluded.)

Figure B shows the steadily rising number of recreational boats in use in the years 1972-1982, as well as the downward trend in fatality rates per 100,000 boats during this period. Estimates of

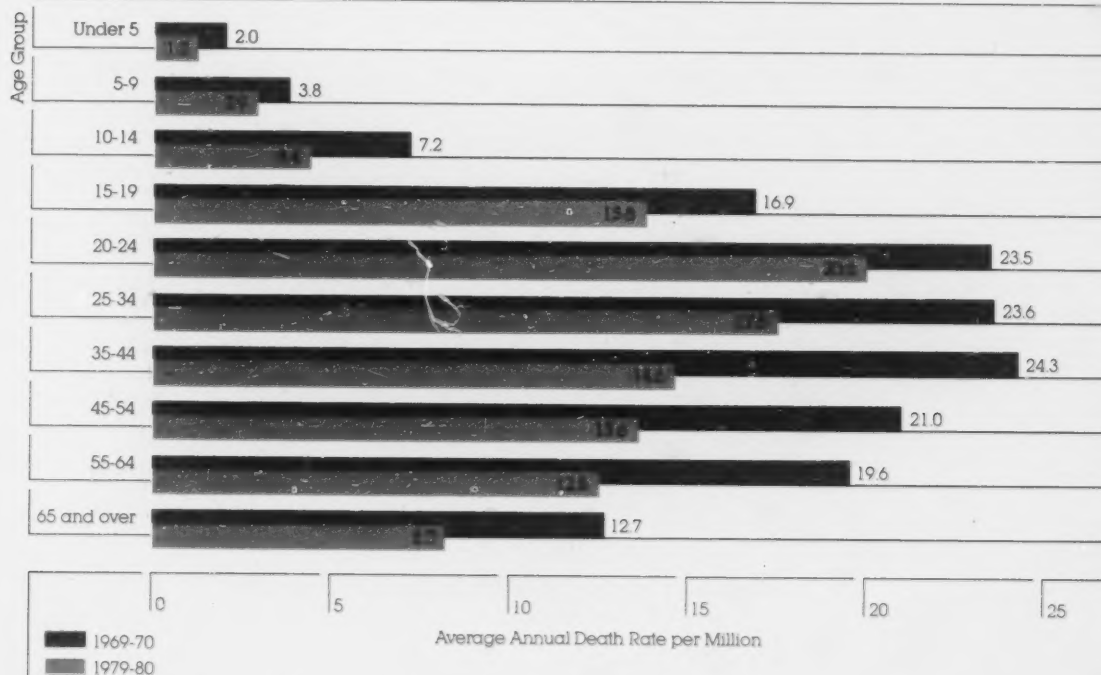


the number of recreational boats in use in the United States are based on nationwide telephone surveys covering the years 1973 and 1976, which were conducted by the Coast Guard, as well as on boat-numbering statistics and estimates of boat production and boat losses in later years. While the number of deaths in boating

accidents has fluctuated from year to year, there has been a steady increase in the number of boats in use—from 8.5 million in 1972 to 14.9 million in 1982. The fatality rate per 100,000 boats, therefore, has generally declined—from 16.9 deaths per 100,000 in 1972 to 7.9 in 1982. A more meaningful fatality rate would be one based on

RECREATIONAL BOATING FATALITIES

Figure A—Mortality from Water Transport Accidents Among Males
United States—1969-70 and 1979-80



Source of basic data: Reports of the Division of Vital Statistics, National Center for Health Statistics

exposure (the extent of participation in boating activities); unfortunately, no reliable information on such exposure is available.

Coast Guard reports also provide data on the circumstances associated with fatalities in boating accidents. These reports show that half of the fatal boating accidents each year occur in nontidal calm waters (such as lakes, ponds, reservoirs, dams, gravel pits) under good weather conditions and with light or moderate wind. Open motorboats, mainly craft equipped with outboard motors, are involved in half of the fatalities,

rowboats and canoes in little more than a fifth, while sailboats are involved in a very small proportion of the accidents—about 5 percent.

“One half the fatal boating accidents each year occur in nontidal calm waters.”

Analysis of boating fatalities according to operation at the time of the accident indicates

that the greatest number of fatalities usually occur while cruising (proceeding normally, unrestricted, with an absence of drastic rudder or engine changes). The second largest number of fatalities generally occur when the boat is being used for fishing. Drifting (proceeding without use of engines, oars, or sails but carried along only by the tide and/or wind) ranks third. These three operations account for three-fourths of all boating fatalities each year.

As shown in the table which lists the number of fatalities in the five-year period 1978-1982, almost two-fifths of all boating accident victims perished when their boats capsized. A quarter of the fatalities were caused by falling overboard. One-seventh were due to collisions with other vessels or with fixed or floating objects. The Coast Guard attributes the great majority of such fatali-

ties to some fault on the part of the operator in handling the vessel. Chief among these faults are inattention or carelessness, overloading the boat or improper weight distribution, and lack of training and experience on the part of the operator, which often leads to operations exceeding the capabilities of the craft.

Alcohol and Boating Accidents

Alcohol abuse while boating may be the leading cause of recreational boating deaths. According to the National Transportation Safety Board, at least two out of every three boating fatalities are alcohol related. In some areas of the country, moreover, almost two-fifths of the skippers involved in fatal boating accidents were judged to

Fatalities from Recreational Boating Accidents
United States - 1978-1982

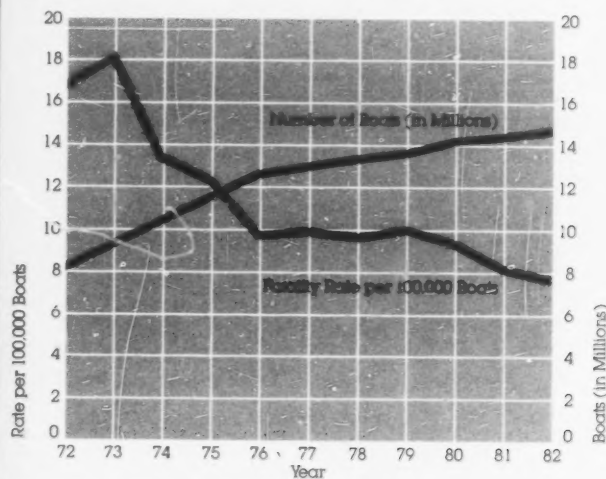
Type of Accident*	1978	1979	1980	1981	1982
Total	1,321	1,400	1,360	1,208	1,178
Capsizing	469	518	536	467	409
Falling overboard	359	327	346	288	320
Collision	187	218	184	149	179
With another vessel	69	90	69	48	70
With fixed object	105	96	90	90	91
With floating object	13	32	25	11	18
Swamping/Flooding	93	94	62	79	86
Sinking	25	38	61	46	49
Fire/Explosion	8	24	9	7	9
Fuel	6	24	9	6	9
Other	2	0	0	1	0
All other	180	181	162	172	126

*Type of accident refers only to the first event that occurred. Some accidents involve more than one event, e.g., a grounding followed by a sinking is included only as a grounding.

Source: Reports of the U.S. Coast Guard.

RECREATIONAL BOATING FATALITIES

Figure B—Recreational Boating Fatality Rates 1972-1982



Source: Reports of the U.S. Coast Guard.

be legally drunk at the time of the accident. The involvement of alcohol in boating accidents and fatalities has been grossly underreported. Most states prohibit drinking alcoholic beverages while operating a boat, but enforcement is practically nonexistent. Although a number of states have recently begun to address the problem, there is

"At least two out of every three boating fatalities are alcohol related."

a dearth of educational material covering the issue. However, the National Safe Boating Council, which sponsors National Safe Boating Week each year, will focus on alcohol and boating in this year's campaign.

Personal Flotation Devices

The law requires every boat to carry a Coast Guard-approved personal flotation device (PFD) for each person aboard (including water skiers being towed) that must be the proper size for the intended wearer. However, there is no requirement that the PFD actually be worn. The use rate of PFDs (in the seven out of 100 times that they are available) is about half that of auto safety belts. Coast Guard studies further indicate that seven out of 10 of those killed in boating accidents did not use the PFDs that were known to be on board. To point up the importance of PFD use, the motto for National Safe Boating Week in 1983 was "Wear Your PFD...Your Friend for Life."

The unsafe practices that contribute to recreational boating accidents can be eliminated to a considerable extent through safety education.

"The use rate of personal flotation devices is about half that of auto safety belts."

The decrease in mortality from boating accidents is evidence that programs to promote boating safety have achieved a considerable measure of success. Unfortunately, as more and more people participate in this sport, many will venture forth for the first time with little or no formal instruction on boat handling. With the approach of the summer season, when recreational boating activities are at their height, both novices and experienced operators should take advantage of the many safety education programs sponsored by individual states, the Coast Guard, the Coast Guard Auxiliary, the U.S. Power Squadron, the American Red Cross, the National Safety Council, and the Boat Owners Association of the United States. These organizations are rendering a valuable service in an effort to make boating a safe as well as a pleasurable activity.

Guest Editorial

The Federal Role in Recreational Boating Safety



Recreational boating in the United States is a diverse and ever-increasing leisure activity. The safety of all who use our nation's waters is the major concern of the U.S. Coast Guard. The Coast Guard has been involved in the preventive aspects of boating safety since passage of the first federal laws specifically addressed to safety of small boats in 1910 and 1918. Subsequent major federal laws in 1940, 1948 and 1971 greatly expanded the Coast Guard's responsibility and authority.

Under the Federal Boat Safety Act of 1971, the Coast Guard was assigned the responsibility of coordinating a national boating safety program. The Recreational Boating Safety Program is now one of several specific Coast Guard programs, conducted under a Program director on the commandant's staff through the twelve district commanders in the field. However, the task of promoting safety cannot—and should not—be undertaken by the federal government (the Coast Guard) alone. The states as well as the many boating organizations and the boating industry are partners in this effort. The Coast Guard promotes cooperation and uniformity among these entities and provides assistance as well. Respective roles continue to evolve. Here is where we are.

Liaison for State Boating Safety Programs

Effective liaison between the states and the Coast Guard assists the states in developing and administering comprehensive state boating safety programs and encourages uniformity of laws and regulations. State boating safety programs include enforcement, education, boat registration, training and accident investigation functions. The Coast Guard administers an assistance program, financed from federal motorboat fuel taxes and aimed at fostering development of active state boating safety programs.

Because dedicated boating law enforcement is more properly a function of state and local jurisdictions, the Coast Guard has reduced its on-the-water activity directed at enforcing boating safety laws. At the same time, we offer training to improve professionalism, and continue to enforce boating safety laws in the course of general enforcement of all laws for which we are responsible.

Boating Education—National Coordinator

The Coast Guard's role in boating education is as a national coordinator, promoting maximum effective involvement of all parties concerned with education, and providing guidance regarding the minimum essential safety information that boating educational programs should contain. The task of providing direct education to boaters rests primarily on the individual states and volunteer organizations such as the Coast Guard Auxiliary, the U.S. Power Squadrons and the Red Cross.

The 42,000 member civilian volunteer Coast Guard Auxiliary assists the Coast Guard in promoting safety in recreational boating through its classroom education and courtesy safety examination of vessels. The Auxiliary also provides substantial assistance in other Coast Guard missions, such as search and rescue.

Regulation of Construction Standards

Regulation of manufacturing construction standards is an important federal responsibility that facilitates interstate commerce by ensuring national standards of construction. This part of the Coast Guard program also prevents importation of unsafe marine products while maintaining the credibility of U.S. standards in international markets.

The Coast Guard has established the basic system of minimum federal standards and regulations where a need has been justified by accident analysis, evaluation of other data, or research. On these and other major boating safety matters we consult the National

Boating Safety Advisory Council—a 21-member advisory body required by the Federal Boat Safety Act with membership drawn equally from state boating law administrators, manufacturers of boats and associated equipment, boating organizations and the general public.

Consumer Protection Program

Through our product assurance program we educate manufacturers on federal requirements; we evaluate compliance, primarily through testing boats bought in the open market and through factory visits; we investigate potential defects that present substantial risk of injury to the public and we enforce manufacturers' responsibilities. When a product is found that does not comply with standards, the manufacturer must conduct a defect notification campaign by advising first and known subsequent purchasers of boats, dealers and distributors. The defect is corrected at the manufacturer's expense. This is a major federal consumer protection program.

All of the institutional cooperation and standards, however, are only truly meaningful if the operator of the recreational boat is equally aware of safe boating practices and follows them. The marked reduction in the boating fatality rate since 1971 indicates that we are making progress. What we need now and in the future is a continued emphasis on education—on the dangers of drinking while boating or safe boating practices in general—and emphasizing the responsibility of boat operators for the lives of others, as well as their own. For our part, the Coast Guard will continue to work to keep everyone pulling together to achieve the common goal of safe and happy boating.

James S. Gracey, Admiral
U.S. Coast Guard Commandant

P

ROJECTIONS OF POPULATION GROWTH AT THE OLDER AGES

Men and women aged 65 and over will constitute the fastest growing segment of the population during the next 70 years. This was one of the findings of a recent study of population trends and projections in the United States.¹ Further analysis now indicates that the population in the age 85 and over category is expected to increase at a rate about four times greater than that for the age 65 and over group as a whole. The rapid expansion of this older group has important social and economic implications for the future.

Marked Growth...Ages 85 and Over

In July 1982 there were 26,824,000 persons aged 65 and over in the nation. Population projections indicate that this group is likely to increase to 35,036,000 by the year 2000 (a gain of 31 percent) and may even reach 67,060,000 by 2050 (a gain of 150 percent). By comparison, the population at ages 85 and over will probably rise from 2,445,000 in July 1982 to 5,136,000 in 2000 (or by 110 percent) and to 16,063,000 in 2050 (or by 557 percent).

As a result of the extremely rapid increase in the number of persons aged 85 or older, their proportion of the population at ages 65 and over will rise from less than a tenth in 1982 to about one-quarter in 2050. Moreover, persons aged 85

"During the next 70 years, the number of people 85 years and over is expected to increase 4 times faster than those 65 and over."

and over are expected to comprise more than 5 percent of the total population of the United States in 2050—up from 1 percent in 1982. Additional data on the population in age groups 65 and over and 85 and over in each decennial

period between 1970 and 2050 are presented in Figure A.

Future Consequences

The marked increase in the number of senior citizens, especially at ages 85 and over, will have a significant effect on the nation's health care, financial services, and social support systems. The impact will be felt to a greater extent in those areas of the country with higher concentrations of older residents.²

The elderly have more health problems than their juniors;³ and tend to have more complicated and severe diseases that require longer periods of hospitalization and more extensive nursing services, as well as greater utilization of home health care and extended care facilities.⁴ These conclusions are supported by a recent study of the National Center for Health Statistics:

"By the year 2050, people aged 85 and over are expected to comprise more than 5 percent of the population."

their projections of health services utilization and health care expenditures in the 1978-2003 period point to increasing numbers of individuals with limitation of activity, lengthening hospital stays, greater numbers of nursing home residents, and a corresponding rise in costs.⁵

The increasing size of the older population will also place unprecedented stress on the Social Security system and private retirement plans, as well as on personal savings and pension arrangements. New and diverse financial products will have to be devised to serve the needs of this group. With increased longevity in the future, it is conceivable that middle-aged children could have both parents and grandparents to care for.

Table 1—Population Aged 65 and Over
United States—1970-2050

Year As of July 1	Male				Female			
	Ages 65 and Over	Ages 65-74	Ages 75-84	Ages 85 and Over	Ages 65 and Over	Ages 65-74	Ages 75-84	Ages 85 and Over
Number in Thousands*								
1970	8,413	5,461	2,456	496	11,693	7,032	3,727	934
1980	10,363	6,787	2,886	691	15,345	8,861	4,901	1,583
1982	10,778	7,004	3,052	723	16,046	9,131	5,192	1,722
1990	12,652	7,851	3,827	964	19,147	10,193	6,456	2,496
2000	13,734	7,764	4,577	1,393	21,302	9,930	7,630	3,743
2025	24,210	15,089	7,053	2,069	34,426	17,999	10,819	5,609
2050	27,044	13,914	8,504	4,627	40,016	16,108	12,472	11,436
Age Distribution†								
1970	100.0%	64.9%	29.2%	5.9%	100.0%	60.1%	31.9%	8.0%
1980	100.0	65.5	27.8	6.7	100.0	57.8	31.9	10.3
1982	100.0	65.0	28.3	6.7	100.0	56.9	32.4	10.7
1990	100.0	62.1	30.3	7.6	100.0	53.3	33.7	13.0
2000	100.0	56.5	33.3	10.2	100.0	46.6	35.8	17.6
2025	100.0	62.3	29.1	8.6	100.0	52.3	31.4	16.3
2050	100.0	51.5	31.4	17.1	100.0	40.2	31.2	28.6
Percent Change								
1970-1980	23.2%	24.3%	17.5%	39.3%	31.2%	26.0%	31.5%	69.5%
1982-1990	17.4	12.2	25.4	33.3	19.3	11.6	24.3	44.9
1990-2000	8.6	-1.2	19.6	44.5	11.3	-2.6	18.2	50.0
2000-2025	76.3	94.3	54.1	48.5	61.6	81.3	41.8	49.9
2025-2050	11.7	-7.8	20.6	123.6	16.2	-10.5	15.3	103.9
1982-2000	27.4	10.9	50.0	92.7	32.8	8.8	47.0	117.4
1982-2050	150.9	98.7	178.6	540.0	149.4	76.4	140.2	564.1

*Figures have been independently rounded; hence, totals may not equal the sum of the parts.

†Percent of population aged 65 and over.

Source of basic data: Various reports of the Bureau of the Census.

Table 2—Characteristics of Population Aged 65 and Over
United States—March 1982

Characteristics	Male			Female		
	Ages 65 and Over	Ages 65-74	Ages 75 and Over	Ages 65 and Over	Ages 65-74	Ages 75 and Over
Persons in Thousands						
Population	10,310	6,770	3,540	14,920	8,927	5,993
Percent Distribution						
Race	100.0	100.0	100.0	100.0	100.0	100.0
White	90.0	89.7	90.6	90.5	90.1	91.2
All other	10.0	10.3	9.4	9.5	9.9	8.8
Marital Status	100.0	100.0	100.0	100.0	100.0	100.0
Single	4.4	4.9	3.3	5.6	5.3	6.1
Married	80.0	84.0	72.5	40.2	51.3	23.6
Widowed	12.4	7.5	21.8	50.4	38.3	68.5
Divorced	3.2	3.6	2.4	3.8	5.1	1.8
Family Status	100.0	100.0	100.0	100.0	100.0	100.0
In families	83.7	86.6	78.0	56.8	63.0	47.5
Householder	76.8	80.3	70.1	10.0	10.0	10.0
Married, spouse present	73.9	78.0	66.1	1.7	2.3	.9
Spouse of householder	3.1	3.0	3.2	36.4	46.7	21.2
Other	3.8	3.3	4.9	10.4	6.3	16.3
Not in families	16.3	13.4	22.0	43.2	37.0	52.5
Householder	15.3	12.4	21.1	42.4	36.1	51.8
Other	1.0	1.0	.9	.8	.9	.7
Labor Force Status*	100.0	100.0†	100.0‡	100.0	100.0†	100.0‡
In labor force	17.8	26.9	12.2	7.9	14.9	4.5
Employed	17.1	25.8	11.8	7.6	14.4	4.4
Unemployed	.7	1.1	.4	.3	.5	.1
Not in labor force	82.2	73.1	87.8	92.1	85.1	95.5

*Based on 1982 annual average. †Refers to ages 65-69. ‡Refers to ages 70 and over.

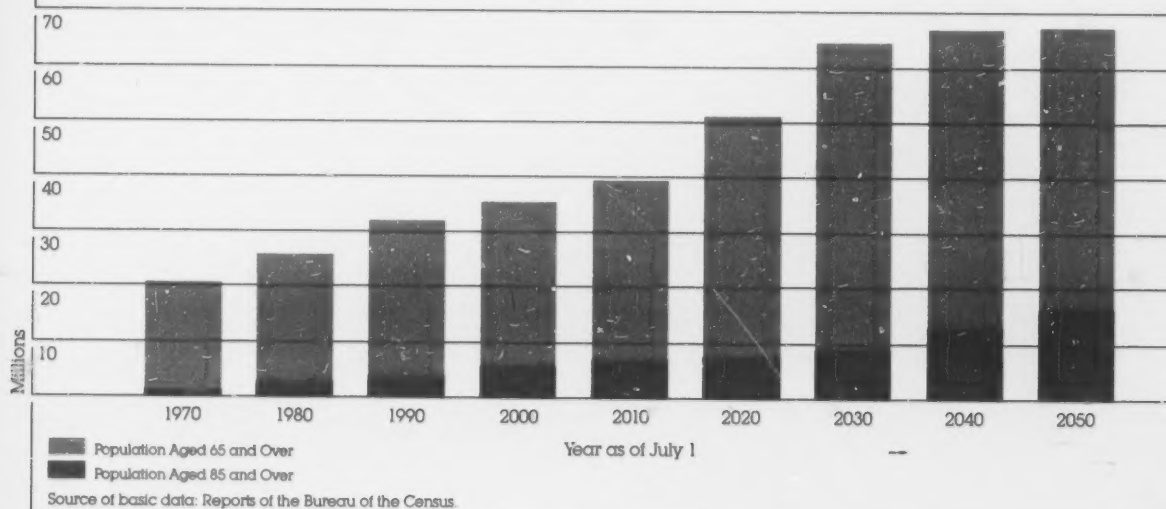
Note: Data relate to the noninstitutionalized population.

Source of basic data: Reports of the Bureau of the Census and the Department of Labor.

Detailed information on the population of the United States at ages 65 and over is presented in Table 1. As shown, there were 10,778,000 men and 16,046,000 women in this age bracket in July 1982. At the same time the population count of persons aged 85 and over included 723,000 men

and 1,722,000 women. The number of women exceeded the number of men by about 5.3 million at ages 65 and over and by approximately 1.0 million at ages 85 and over. Population projections indicate that the sex disparity will widen rapidly as a result of women's more favorable

**Figure A—Population Trends and Projections at Ages 65 and Over
United States—1970-2050**



survival record. By 2000 the effect of this continuing trend will produce a 7.6 million disparity in favor of women at ages 65 and over and a 2.4 million difference at ages 85 and over. By 2050 women will outnumber men by 13.0 million at ages 65 and over and by about 6.8 million at

"With increased longevity, it is conceivable that middle-aged people could have both parents and grandparents to care for."

ages 85 and over. With the growing sex differential at ages 85 and over, the ratio of females per 100 males will increase from 238 per 100 in 1982 to about 280 per 100 in 2020 and will then decline gradually to about 250 per 100 in 2050. A graphic

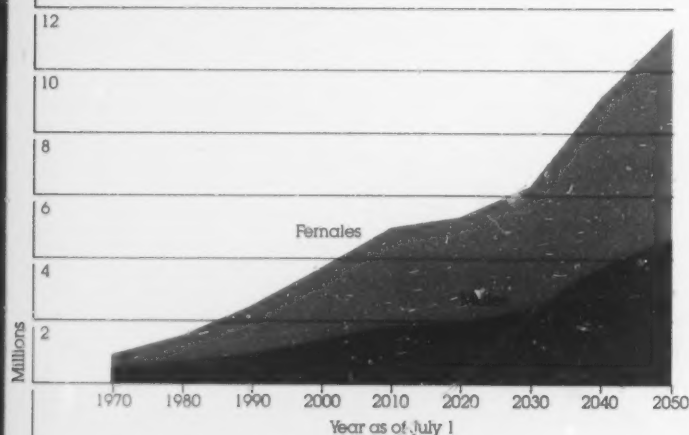
presentation of the widening sex disparity at ages 85 and over is shown in Figure B.

As has been pointed out, the number of men and women aged 65 and over is expected to increase by about 150 percent during the 1982-2050 period; at ages 85 and over, the increase is likely to reach 540 percent for men and 564 percent for women. In 2050, men aged 85 and over will constitute 17.1 percent of all males in the 65 and over age group; the comparable figure for women will be 28.6 percent.

Profile of Senior Citizens

Table 2 presents a profile of the noninstitutionalized population aged 65 and over. In March 1982 there were 25.2 million older residents in the United States. Of this total, 22.8 million (ninetenths) were white; the proportion of whites in each age group was slightly higher among females than among males.

**Figure B—Population Trends and Projections at Ages 85 and Over
United States—1970-2050**



Source of basic data: Reports of the Bureau of the Census.

The outstanding difference in marital status among men and women at the older ages is the substantial disparity in the proportion widowed. In 1982 more than half of the women aged 65

"By 2050 women are expected to outnumber men by 13,000,000 at ages 65 and over; by almost 7,000,000 at ages 85 and over."

and over were widowed; the proportion rose to more than two-thirds at ages 75 and over. On the other hand, fewer than one in eight men aged 65 and over were widowed, with the ratio rising to about one in five at ages 75 and over. The substantial difference between the number of widows and widowers—a ratio of almost six widows for every widower—can be attributed to

the higher death rates among men and the higher remarriage rates among widowers.

Living arrangements among the elderly differ significantly by sex. In 1982 almost seven out of every eight males aged 65 and over resided in family households—the vast majority with their wives. Only one-sixth of the men lived alone or

"In 1982 more than half of women 65 and over were widowed; fewer than 1 in 8 men were in this category."

had another type of living arrangement. However, less than three-fifths of the older women lived in a family household; more than two-fifths of them maintained their own residence or lived with nonrelatives. For both men and women, the proportion living in a nonfamily situation rose sharply with advance in age.

During 1982 more than 3.0 million men and women aged 65 and over were in the labor force. About 1.8 million men (17.8 percent of the males) and about 1.2 million women (7.9 percent of the females) continued to work or to seek employment after their 65th birthday. At ages 65-69, 26.9 percent of the men and 14.9 percent of the women were still in the labor force; participation rates at ages 70 and over were considerably lower. Of those still in the labor force beyond age 65, virtually all were gainfully employed.

¹United States population outlook. *Statistical Bulletin* 65:16-19, Jan-Mar 1984.

²Continued increase in elderly population. *Statistical Bulletin* 63:6-10, Jul-Sep 1982.

³Health of the elderly. *Statistical Bulletin* 63:2-5, Jan-Mar 1982.

⁴National Center for Health Statistics. Americans needing help to function at home. *Advance Data, Vital and Health Statistics*, Number 92, September 14, 1983.

⁵National Center for Health Statistics. Changing mortality patterns, health services utilization, and health care expenditures, United States, 1978-2003. *Vital and Health Statistics*, Series 3, Number 23, September 1983.

The Medical Care Challenge of an Aging Population

In the next 50 years the U.S. population over age 65 will increase markedly. As the preceding article in this issue indicates, especially rapid increases in the numbers of the very old—over 85 years of age—are predicted. This changing demographic composition of the U.S. population has profound implications for the entire society, affecting the economic, social and cultural character of the nation.

Future growth in the numbers of elderly is in part a reflection of the post-World War II "baby boom" bulge. However, it is also spurred by the marked reductions in the death rates of the elderly in the last 15 years. Heart and cerebrovascular death rates have witnessed particularly steep declines for the elderly in recent years.

Increasing Strain on Health Services

While this success is remarkable, one implication is that the United States will face an increasing strain on its health services in future years. The number of elderly living at home with some restriction in their daily activities will increase—in large part because of the rapid growth in the population aged 85 and over.

In light of the serious health problems faced by many aged persons, heavy utilization of a range of health care services is not surpris-

ing. Based on growth in the number of the elderly, total physician visits by this group can be expected to increase from 145 million in 1977 to 186 million in the year 2000.

Shift in Hospital and Nursing Home Care

The increasing number of elderly with chronic and limiting health problems will cause a major shift in hospital care. The United States has been experiencing a considerable growth in hospital admissions by the elderly, while hospital admission rates for those under age 65 have changed very little in recent years. If these trends continue, the proportion of hospital days accounted for by the elderly will increase from 38 percent to 58 percent by the year 2000.

Nursing homes will also experience an increase in the numbers of patients if current trends and policies prevail. The number of aged in nursing homes should increase from 1.2 million in 1977 to 1.8 million by the year 2000.

Rising Health Expenditures

The aging of the U.S. population is likely to increase further the expense of its already costly health care system. The proportion of the gross national product devoted to health care in the United States could well reach almost 15 percent by the year 2000.

Total health expenditures on the aged are expected

to rise from about \$50 billion in 1978 to almost \$200 billion in 2000, in constant 1980 dollars. Increased expectancy and improved health of the elderly will come with a price—one that is clearly affordable to a growing and prosperous society. But it does represent a challenge to develop innovative approaches to providing quality health care more economically.

Medicare: Public Policy Concern

This creates a particular problem for the federally financed Medicare program. Projected deficits in the Medicare program are a major public policy concern. Presures will mount to curb hospital and physician reimbursement for services provided to the elderly. Proposals to shift more of the cost to patients through higher deductibles and coinsurance are likely to surface. New revenues through increased payroll taxes or Medicare premiums are options also likely to be considered. Debate over the merits of these and other alternatives will dominate the health policy scene for the next few years.

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STATISTICAL BULLETIN APR-JUN 1984

CAPSULE BRIEFS

Capsule Briefs are timely selections from the literature that Statistical Bulletin thinks will have broad reader interest.

Quo Vadis (Pediatrics?)

In Nashville, 207 mothers were interviewed about their children's health needs in local pediatricians' waiting rooms. It was found that these mothers' main concerns were about parental competence, child behavior management and child development, and *not* physical health issues. Importantly, only 28 percent of the mothers discussed these topics with their pediatricians, believing their doctors to be concerned exclusively with disease. If pediatricians are to develop new directions in their practices, the authors concluded that they must be able to assess nondisease child care issues and develop competent intervention/communication skills. (G. B. Hickson *et al*, *Pediatrics* 72 (5): 619-624, 1983)

Some Wives May Break a Man's Heart

We always thought an educated wife was a good thing in any marriage. Now Suzanne Haynes, Ph.D., and her co-workers have shown that an educated wife may be a disadvantage, at least if she lives in Framingham, Mass., and if a marital objective is to prevent her spouse's heart attack. In two recent articles the investigators showed that the risk of coronary heart disease (CHD) in husbands was 2.6 times in men whose wives had 13 or more years of education (like Dr. Haynes), compared with wives with only grammar school education (95 percent CI = 1.0 - 6.9). Further, men with Type A personality patterns were 2.5 times more likely than Type Bs to develop CHD if their wives had 13+ years of schooling. (S. Haynes *et al*, *American Journal of Epidemiology* 118 (1): 1-22, and 23-41, 1983)

Is Alcohol Abuse a Major National Problem?

Yes, it is if defined as five or more drinks, one or more times per month. In a recent seven-state survey, the Centers for Disease Control report (using a sample derived from random digit phone dialing and a standard interview questionnaire) that 23.5 percent of respondents in Texas (median state) fit that definition. The range was from 12.7 percent (Tennessee) to 30.9 percent (Michigan). Though sizable magnitudes, as self-report data they probably represent substantial *underestimates*. Chronic heavy drinking (56 or more drinks per week) was 8.7 percent in the median state (Iowa), and ranged from 4.3 (Tennessee) to 14.8 (New Hampshire). Men reported more acute heavy drinking than women by a factor of 2-3 times across all ages. (Centers for Disease Control, *Morbidity and Mortality Weekly Report* 32 (46): 603-610, 1983)

To Be Or Not To Be: Cost Containment?

Labeling something can sometimes induce important behavioral changes, but seldom *opposite* to the predicted direction. In one West Coast medical-care cost control program (1978-81) it was found that annual dollar costs per enrollee *increased* 56 percent during the period, ranging from 32 percent for primary care to 72 percent for inpatient care. The authors concluded that, though successfully marketed, the program could not achieve its goals because it upped benefits and removed enrollees' cost constraints, but did not impose any new constraints on their physician's practice patterns. (S. H. Moore *et al*, *New England Journal of Medicine* 309 (22): 1400-1404, 1983)

"DRG Upon the Wall, Who is the Fairest...?"

Since October 1, 1983, hospital Medicare reimbursement depends on a diagnostic related group (DRG) code assigned each discharge. The relative dollar value of these DRGs varies with diagnosis, age, whether a surgical procedure is performed, and its kind, if any. This data driven system depends heavily on a reliable valid hospital discharge record. A Cleveland research team investigating Medicare records provided by a hospital in 1978 found the relevant federal data base markedly discrepant for the hospital's diagnostic codes (48 percent), surgical procedure codes (47 percent), and assigned DRGs (61 percent). The authors made a belated and unheeded plea (p. 1011) that "case mix (i.e., DRG-based) reimbursement should not be implemented until...the reliability of the data (has been determined)." (H. D. Doremus and E. M. Michenzi, *Medical Care* 21 (10): 1001-1011, 1983)

Coffee, Tea Seem Worry Free

Now some good news for coffee and tea drinkers, at least for those made anxious by reports that consumption of these beverages may be linked to ill health. From a federal study of 3,776 persons 25-74 years old, two investigators at the National Institute of Mental Health found no statistical association between the amount of coffee/tea consumed per day and symptoms of anxiety as determined by six subscales and selected item analysis from a standardized mental health questionnaire. (W. W. Eaton and J. McLeod, *American Journal of Public Health* 74 (1): 66-68, 1984)

Down on the Farm: 1982

Compared with 1920 when 30 percent of Americans lived on farms, the 1982 estimate ranges from 2.4 to 3.0 percent (depending on the definition of "farm" population used). Racially, a major change has occurred since 1920: then, nearly half the black population lived on farms, whereas in 1982 less than 1 percent lived there. Though the total 1982 American farm population is estimated at 170,000 fewer than 1981, the two-year decline 1980-82 (431,000) underscores a trend throughout the 20th century in rural America. In 1981 nearly half (45 percent) of farm families' income was less than \$15,000 per year. (U.S. Bureau of Census, Current Population Reports Series P-27, No. 56, U.S. Government Printing Office, Washington, D.C., 1983)

How Old Was He?

For persons whose ages were stated to be over 85 years, death certificates were only moderately reliable as sources of age, according to investigators using a sample of deaths around 1970 from New Jersey and Pennsylvania. By matching census and death certificates for specific individuals it was found that for deaths at ages 85-89 there was good agreement in 95 percent of deaths among whites, but in only 68 percent of deaths among blacks. This tendency to overestimate age among extremely old blacks, according to the authors, "makes it clear that non-white mortality at the oldest ages has been consistently understated in official statistics." (I. Rosenwaike and B. Logue, *Demography* 20 (4): 569-585, 1983)

H

OW
CHILDREN
AND
ADOLESCENTS
PERCEIVE
ALCOHOL
AND OTHER
DRUG ABUSE

The high level of alcohol, cigarette, and other drug use among children and adolescents in the United States has occasioned a great deal of concern and prompted the creation of THE CHEMICAL PEOPLE, a community outreach program launched in November 1983 to combat alcohol and drug abuse by the nation's youth. This program has been funded in large part by the Metropolitan Life Foundation, in a continuation of Metropolitan Life's long-standing commitment to the solution of major health problems.

"Understanding the attitudes, perceptions, and beliefs of young people about drugs may lead to new, more effective methods to combat drug abuse."

To promote this broad-range program of education, intervention, prevention, and treatment, the *Statistical Bulletin* plans to study and report on several facets of the drug abuse problem. The extent of alcohol and other drug abuse among children and adolescents was discussed in the Jan-Mar 1984 issue of the *Statistical Bulletin*.¹ The current article focuses attention on how children and adolescents perceive (a) the reasons their peers start using drugs, (b) the extent of drug use by their peers, (c) the dangers of drug use, and (d) the availability of drugs. Understanding the attitudes, perceptions, and beliefs of children and adolescents about alcohol and other drugs may furnish new and more effective methods to combat drug abuse.

The first major national survey of young children's attitudes and perceptions about alcohol and drugs was conducted by the *Weekly Reader*, a classroom publication.² In this readership opinion poll, teachers gave questionnaires to 3.7 mil-

lion students in grades 4 through 12 throughout the United States. From the completed questionnaires of the 500,000 children who responded, a random sample of about 100,000 was selected for analysis (with adjustment to reflect the actual population distribution in 1980 by geographic region, population density, and grade level).

It must be noted that students participating in the survey reported on *their perceptions* of the actions of children their own age. The students responding to the questionnaire did not report on their own behavior, but on what they believed to be happening among other students.

Reasons Peers Start Using Drugs

According to information gleaned from the questionnaires, most fourth graders thought the main reason children their age started to use alcohol was a desire to "feel older." Most students in grades 5-8 believed the main reason was a desire to "fit in with other kids," while most high school students thought it was to "have a good time." Students in every grade, however, reported that the main reason children their own age started to use marijuana was to "fit in with other kids." In grades 4-8, girls were more likely than boys to report that other children try alcohol or marijuana to "fit in."

"Peer pressure to use alcohol or marijuana was reported by one-third of fourth graders and more than half of seventh graders."

There was also other evidence of peer pressure. The extent students thought that children "push each other" to try either alcohol or marijuana increased with age and was higher for alcohol than it was for marijuana. About a third of the fourth graders reported that they thought chil-

**Table 1—Trends in Perceived Harmfulness of Drugs
High School Seniors, 1975-1982**

Q. How much do you
think people risk harming
themselves (physically
or in other ways), if they...

Percent saying "great risk"*

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982
Try marijuana once or twice	15	11	10	8	9	10	13	12
Smoke marijuana occasionally	18	15	13	12	14	15	19	18
Smoke marijuana regularly	43	39	36	35	42	50	58	60
Try LSD once or twice	49	45	43	43	42	44	46	45
Take LSD occasionally	81	81	79	81	82	83	81	84
Try cocaine once or twice	43	39	36	33	32	31	32	33
Take cocaine regularly	73	72	68	68	70	69	71	73
Try heroin once or twice	59	59	56	53	50	52	53	51
Take heroin occasionally	76	76	72	71	71	71	72	70
Take heroin regularly	87	86	83	87	88	86	88	83
Try amphetamines once or twice	35	33	31	30	30	30	26	25
Take amphetamines regularly	69	67	67	67	70	69	66	65
Try barbiturates once or twice	36	33	31	31	31	31	28	28
Take barbiturates regularly	69	68	69	66	72	72	70	68
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	5	5	4	3	4	4	5	4
Take one or two drinks nearly every day	22	21	19	20	23	20	22	22
Take four or five drinks nearly every day	64	61	63	63	66	66	65	66
Have five or more drinks once or twice each weekend	38	37	35	35	35	36	36	36
Smoke one or more packs of cigarettes per day	51	56	55	59	63	64	63	61

*Answer alternatives were: (1) No risk (2) Slight risk (3) Moderate risk (4) Great risk and (5) Can't say drug unfamiliar

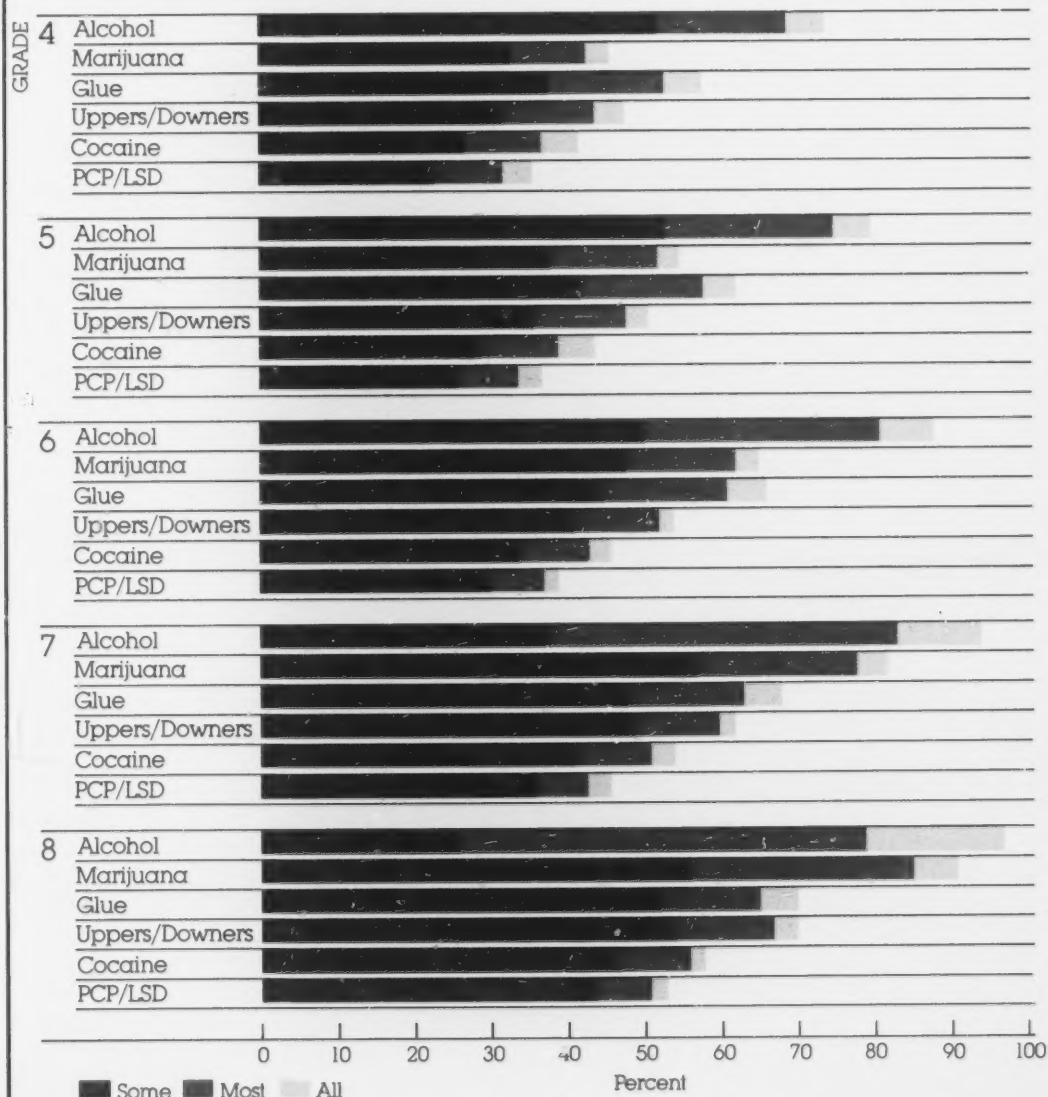
Source of basic data: *Student Drug Use in America: 1975-1982* National Institute on Drug Abuse, 1983.

dren in their age group felt pressured by their peers to try either alcohol or marijuana; in the seventh grade the corresponding proportions were 60 percent in the case of alcohol and 50 percent for marijuana. Peer pressure to start drinking alcohol or smoking marijuana was perceived to be greater by children in urban areas than by those in nonurban areas.

Extent of Drug Use by Peers

Data on children's perceptions of drug use among their peers are presented in Figure A. About 75 percent of the fourth graders believed that children their age in their town had tried alcohol, while almost all the eighth graders (97 percent) believed this. Almost half the fourth graders thought that their peers had tried mari-

**Figure A—Children's Perceptions of Drug Use Among Their Peers
By School Grade Level, 1983**



Source of basic data: *A Study of Children's Attitudes and Perceptions About Drugs and Alcohol*. Xerox Education Publications, 1983.

juana, compared with about 90 percent of the eighth graders who thought so. Children in urban areas and on both coasts reported more peer involvement with drugs than did children in other areas.

"Children in urban areas and on both coasts reported more involvement with drugs among their peers than did children in other areas."

As shown in Figure A, many students—even as early as the fourth grade—believed that significant numbers of children their age had experimented with such *hard* drugs as cocaine, LSD, or "angel dust" (PCP). Such findings indicate that most children in the survey believed the use of alcohol and other drugs to be much greater among school-aged children than had been found in other surveys. Other studies³ showed a lower prevalence of hard drug usage. The fact that young children believe drug use is more common than it actually is has grave implications, since so many children have said drugs were used to "fit in with other kids." On the other hand, estimates by high school seniors of the extent of drug use among their friends—shown in Figure B—paralleled more closely the seniors' own reported drug use.⁴

Dangers of Drug Use

Almost 75 percent of the students in the fourth grade saw "some" or "great" risk that children their age would harm themselves (physically or in other ways) by taking one drink of alcohol daily or smoking one marijuana cigarette daily; this proportion increased slightly with advance in grade level. Students in every grade considered marijuana a greater risk than alcohol.

Data on recent trends in high school seniors' beliefs concerning the dangers associated with using various drugs are presented in Table 1. Such information has been gathered in annual nationwide surveys conducted for the National Institute on Drug Abuse.⁴ As shown in the table, there was a decline in the perceived harmfulness of all levels of marijuana use between 1975 and 1978, but this trend was reversed in later years. In the past few years there has also been a dramatic increase in the proportion of students perceiving "great risk" for those using marijuana *regularly*—from 35 percent of the class of 1978 to 60 percent of the class of 1982. This shift in thinking coincided with the reversal of the previous

"The fact that young children believe drug use to be more common than it is has grave implications, since so many have said that drugs were used to fit in with other kids."

rapid rise in actual marijuana use by this age group, and may very likely be due to the publicity given by scientific circles and the media to the potential dangers of heavy marijuana use.

The proportion of high school seniors who believed that smoking one or more packs of cigarettes a day involved great risk increased from 51 percent of the class of 1975 to 64 percent of the class of 1980, and then dropped slightly to 61 percent of the class of 1982, corresponding in general with the change in the pattern of regular cigarette smoking in this age group over the same period.

High school seniors' attitudes toward the risk associated with various degrees of alcohol usage have remained essentially unchanged during the 1975-1982 period. In 1982 slightly more

**Table 2—Trends in Reported Availability of Drugs
High School Seniors, 1975-1982**

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percent saying drug would be "Fairly easy" or "Very easy" for them to get*

	1975	1976	1977	1978	1979	1980	1981	1982
Marijuana	88	87	88	88	90	89	89	89
Some other psychedelic	48	36	34	34	35	35	33	31
Heroin	24	18	18	16	19	21	19	21
Amphetamines	68	62	58	59	60	61	70	71
Tranquilizers	72	66	65	64	61	59	61	59

*Answer alternatives were: (1) Probably impossible (2) Very difficult (3) Fairly difficult (4) Fairly easy and (5) Very easy
Source of basic data: *Student Drug Use in America: 1975-1982* National Institute on Drug Abuse, 1983.

than a fifth of the students thought that there was great risk in having one or two drinks daily, about a third believed there was great risk in having five or more drinks once or twice each weekend, and two-thirds associated great risk with taking four or five drinks daily.

Assessments by high school seniors of the harmfulness of regular use of the illicit drugs LSD and cocaine have fluctuated only slightly between 1975 and 1982. Among seniors in the class of 1982, 84 percent perceived great risk in using LSD regularly and 73 percent considered regular cocaine use to be dangerous. The proportions of high school seniors who saw much risk in any degree of use of amphetamines and barbiturates declined somewhat. Only about two-thirds of the seniors in 1982 considered regular use of such drugs to be a source of great risk.

Availability of Drugs

Drug use among adolescents is affected by the degree of difficulty they experience in obtaining drugs. High school seniors reported substantial differences in the availability of various drugs. The more widely used drugs were reported to be obtainable by the greatest proportion of this age group. As indicated in Table 2, marijuana appears to be almost universally available; almost 90 percent of the class of 1982 reported that they thought it would be "very easy" or "fairly easy" to get some. Amphetamines were perceived to be readily available by 71 percent of the students, tranquilizers by 59 percent, and barbiturates by 55 percent. About half of the seniors (47 percent) reported that cocaine was easy to obtain, and a third of the students reported that they could procure LSD, other psychedelics, and

opiates other than heroin. However, only a fifth of the seniors thought heroin was easy to obtain.

Perception of the availability of marijuana has been at about the same level since 1975. The perceived availability of tranquilizers has been relatively steady since 1979, after a long period of gradual decline. The number of high school seniors who believed they could easily get amphetamines has increased since 1977, while the number who thought barbiturates could be ob-

"Drug use among adolescents is affected by the degree of difficulty they experience in obtaining drugs."

tained easily has increased since 1980. There was a substantial rise in the reported availability of cocaine between 1977 and 1980, but no further increase has been reported in 1981 and 1982.

Without doubt, the attitudes, beliefs, and perceptions about alcohol and other drugs among children and adolescents will influence their actual—or future—use of these drugs. A greater understanding of the youthful viewpoint about drugs can provide more pointed direction for the community task forces throughout the United States in implementing the program developed by THE CHEMICAL PEOPLE.

Other aspects of alcohol and drug abuse among youngsters will be discussed in future issues of the *Statistical Bulletin*.

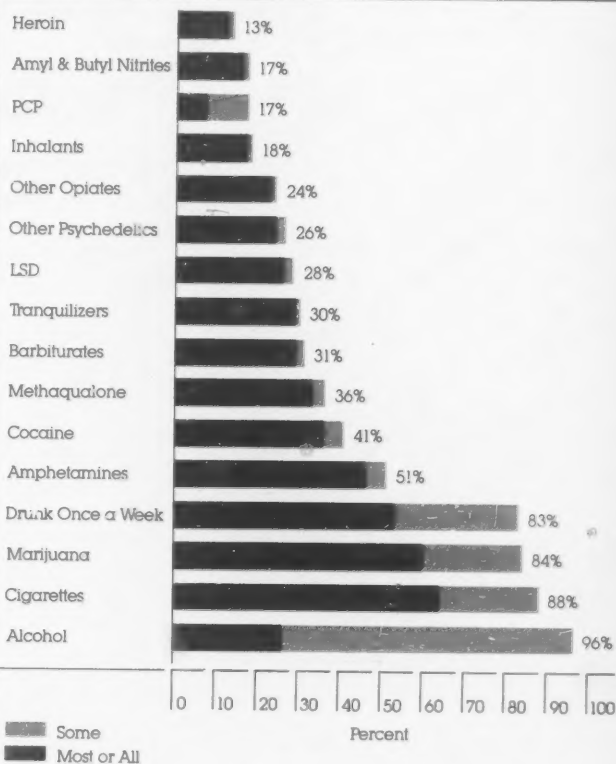
¹Alcohol and other drug abuse among adolescents. *Statistical Bulletin* 65:4-13, Jan-Mar 1984.

²A Study of Children's Attitudes and Perceptions About Drugs and Alcohol. *Nerco Education Publications*, 1983.

³National Household Survey on Drug Abuse, 1982. National Institute on Drug Abuse, 1983.

⁴Student Drug Use in America: 1975-1982. National Institute on Drug Abuse, 1983.

Figure B—Proportions of Friends Using Each Drug As Estimated by High School Seniors, 1982



Source of basic data: Student Drug Use in America: 1975-1982. National Institute on Drug Abuse, 1983.



ACCIDENT DEATH TOLL CONTINUED TO DECLINE IN 1983

Accidents caused approximately 91,000 deaths in the United States in 1983, about 2,000 fewer than in 1982, according to estimates by Metropolitan Life Insurance Company. The provisional mortality rate from accidents for the year was at an all-time low of 38.9 per 100,000 population, more than 3 percent below the fatality rate of 40.2 in 1982.

"Metropolitan Life estimates that the accident death rate for 1983 was 38.9 per 100,000 population, an all-time low."

The declining trend in accident mortality since 1980 was slowed down in 1983 to some degree because of extremes in severe weather conditions. A series of heat waves during July and August have been linked to at least 200 accidental deaths in the East, Midwest, and South. This heat spell, with temperatures remaining in the upper 90's and lower 100's, was the worst since that of the summer of 1980, when about 1,300 deaths were reported by the National Oceanic and Atmospheric Administration. The bitter cold spell that swept the nation during late November and December contributed to more than 375 deaths across the country, including those due to exposure, fires, and traffic and aviation accidents.

"The death toll from motor vehicle accidents in 1983 is estimated to be 44,500, the lowest since 1963."

Motor vehicle accidents were responsible for 44,500 deaths in 1983, about 1,500 fewer than in the previous year. This was the fourth successive

year in which there was a decline in the number of deaths from motor vehicle accidents. The death toll for 1983 is the lowest since 1963. Preliminary data indicate that the death rate per 100 million miles traveled reached a record low of 2.7 in 1983. Government analysts link the drop in motor vehicle accident fatalities in the past four years to the decline in the nation's economy during that period. Part of the decrease in fatalities, however, is undoubtedly due to the nationwide campaigns against alcohol-impaired driving and for child-restraint devices.

Deaths from injuries in and about the home accounted for about 20,000 deaths in 1983, about 1,000 fewer than in 1982, and the lowest on record. The 10,800 job-related deaths in 1983 were also the lowest on record; approximately 3,700 of these are included in the estimated 44,500 motor vehicle fatalities for the year. Public accidents, other than those involving motor vehicles, was the only major category of accidents to show an increase in 1983; the number of deaths rose to 19,500, or about 500 more than the corresponding number in 1982.

Catastrophic Accidents in 1983

According to records maintained by Metropolitan Life Insurance Company, about 550 persons lost their lives in catastrophes (accidents taking five or more lives) in 1983. The death toll from such accidents was about 40 percent lower than that in 1982. There was a significant decrease in deaths from every type of catastrophe except fires, where the death toll was approximately the same in both years. Cataclysms (tornadoes, floods, hurricanes, blizzards, etc.) caused a third of the catastrophic deaths in 1983. Accidents in civil aviation and in fires were each responsible for a fifth of the catastrophic deaths, while military aviation accidents and motor vehicle accidents each contributed a tenth to the total.

Major Disaster in 1983

The only major catastrophe (one taking 25 or more lives) of the year occurred between May 18-23. For five days torrential rains swept through several states in the South, flooding homes and

highways and unleashing 59 tornadoes which ripped through Texas and part of Louisiana. At least 34 deaths resulted from this disaster.

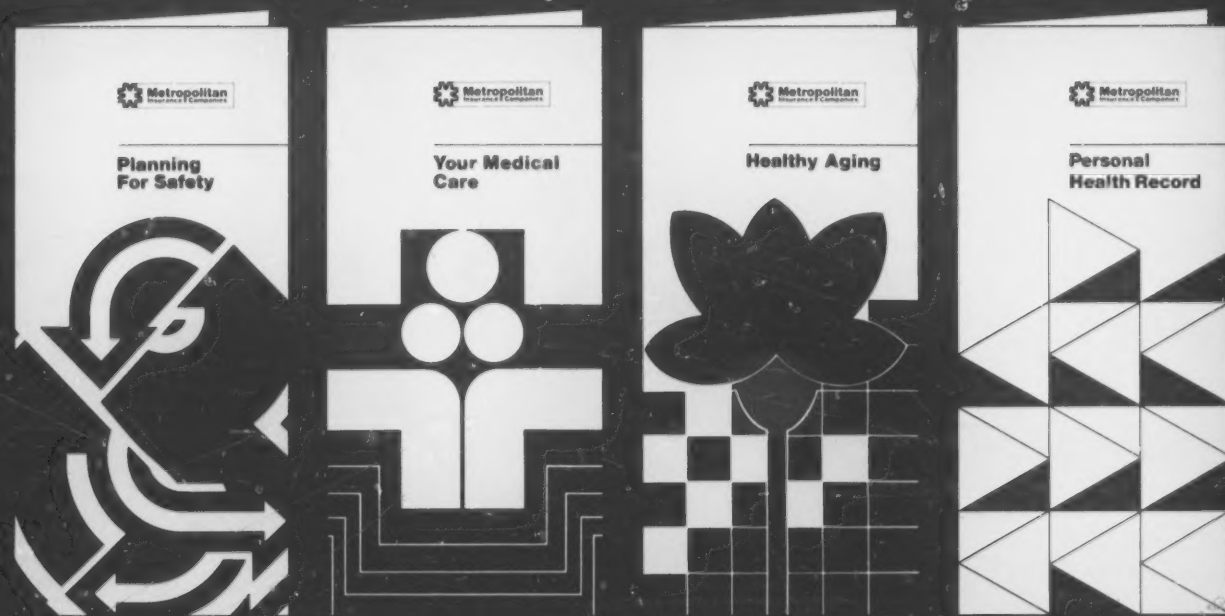
The accompanying table lists the major catastrophes for the past five years.

Major Catastrophes in the United States, 1979-83
Accidents Taking 25 or More Lives

Date	Place	Type of Accident	Number of Lives Lost
1983			
May 18-23	South	Tornadoes, torrential rain, and floods	34
1982			
July 9	Kenner, La.	Crash of scheduled plane	154
January 13	Washington, D.C.	Crash of scheduled plane	78
January 3-5	Northern California	Floods and mud slides	36
April 2	Arkansas, Mississippi, Missouri, Northern Texas	Tornadoes	30
March 19	Near Chicago, Ill.	Explosion and crash of military plane	27
1981			
July 17	Kansas City, Mo.	Collapse of two aerial walkways in hotel	114
October 26	Off Hillsboro Beach, Fla.	Sinking of boat	33
January 9	Keansburg, N.J.	Fire in rest home for aged	31
1980			
November 21	Las Vegas, Nev.	Fire in hotel	85
May 18	Mount St. Helens, Wash.	Volcanic eruption	60
May 9	Tampa Bay, Fla.	Collision of ship with bridge during rainstorm	35
February 13-21	Southern California	Rain, floods, and subsequent mud slides	30
1979			
May 25	O'Hare Airport, Chicago, Ill.	Crash of scheduled plane	273
April 10	Wichita Falls, Texas	Tornado	42
November 1	Gulf of Mexico Off Galveston, Texas	Collision of tanker and freighter	32
April 2	Farmington, Mo.	Fire in retirement home	25

Note: Figures for natural disasters are approximate.

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Men and Women in the U.S.

Mortality from Heart Disease:
Significant Geographic Variations

Drugs Prescribed in Physicians'
Offices for Specific Conditions

State Population Projections by Age

Chances of Dying from
the Leading Causes of Death

50 YEARS AGO

HISTORICAL PERSPECTIVES

IN THE 1934 STATISTICAL BULLETIN

The battle to eradicate smallpox was being won. There were fewer reported cases in the United States than ever before. However, it was pointed out that there were still large sections of the country where people disregarded the disease risk and ignored or belittled the efficacy of the vaccination. Fully three fourths of the more than 6,000 cases reported in the United States occurred in just 12 states. (Today smallpox has been eradicated worldwide—ed.) (Page 7, October)

Metropolitan statisticians computed state life tables.

Expectation of life and mortality rates, by sex, at selected ages for persons living in New York, New Jersey, and Pennsylvania during 1929-31 were presented. (This was the first of a series of articles in 1934 on longevity by geographic areas—ed.) Comparisons of the figures were made with those for 1919-20. The analysis revealed that in the past decade the average remaining lifetime for white females increased at practically every age. For white males the gains were limited to those aged 40 or younger. (Page 8, April)

Canada was experiencing rapid population growth. Birth and death statistics were compared with those of the United States. Canada's high birth rate was attributed to pioneer conditions, and their low death rate was seen as evidence of an advanced public health system. When compared with other countries, the picture of Canadian population increase was seen as reflecting the vigor, intelligence, and social organization of a progressive people. (Page 4, February)

The chances of celebrating a silver or golden wedding anniversary for the white population were presented. During the 1929-31 period, if the bride was 20 years old and the bridegroom was 25, the probability that both of them would live an additional 25 years was 765 per 1,000. Joint survival for 50 years was 186 per 1,000. (The chances of joint survival have increased significantly since then—ed.) (Page 1, November)

Metropolitan statisticians drew attention to the growing significance of an apparently new health problem—the rising number of deaths from coronary artery disease.

President Coolidge and several other prominent persons had recently died from heart disease. For both men and women, whites and nonwhites, the death rates at every adult age group were increasing rapidly. Clinical aspects of coronary artery disease and reasons for its increase were discussed. (Page 4, August)

The relationship of season of the year to the frequency of fatal accidents in the United States during 1929-31 was examined. It was disclosed that the summer months (July in particular) had a disproportionate share of fatal accidents. The reasons given were the relative hazards of an outdoor lifestyle and the large numbers of people on vacation. It was not surprising that drownings were the most prevalent cause of death, and that inadequate supervision of bathing beaches and water sports was a contributing factor. Other leading forms of fatal summertime accidents were food poisoning, poisoning by venomous reptiles and insects, airplane and balloon accidents, injuries by "other vehicles" (largely horse-drawn—ed.), excessive heat, and lightning and other electric shocks. The types of accidents most frequently occurring in each of the other seasons were also detailed. (Page 2, June)